An illustration of a notebook with a white cover and a polka-dot pattern. The notebook is open, showing a lined page. On the left side of the notebook, there are two pencils: a dark grey one and a light grey one. On the right side, there is a light grey pencil and a dark grey pencil. The background is a light grey textured surface.

Stage 3 Learning From Home Week 5

DAILY SCHEDULE

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	Check in	Check in	Check in	Check in	Check in
Morning	Daily 5	Daily 5	Daily 5	Reading and Comprehension	Reading and Comprehension
Middle	Fractions and Decimals Lesson 1	Fractions and Decimals Lesson 2	Mass Lesson 1	Mass Lesson 2	Problem Solving
	Brain Break	Brain Break	Brain Break	Brain Break	Brain Break
Afternoon	Integrated Unit	CAPA (Art)	Integrated Unit	Science and Technology	PE

Monday Check-In

Good Morning! Happy Monday! Hope you had a great weekend.
*Required

1. Name *

.....

2. How are you feeling this morning? *



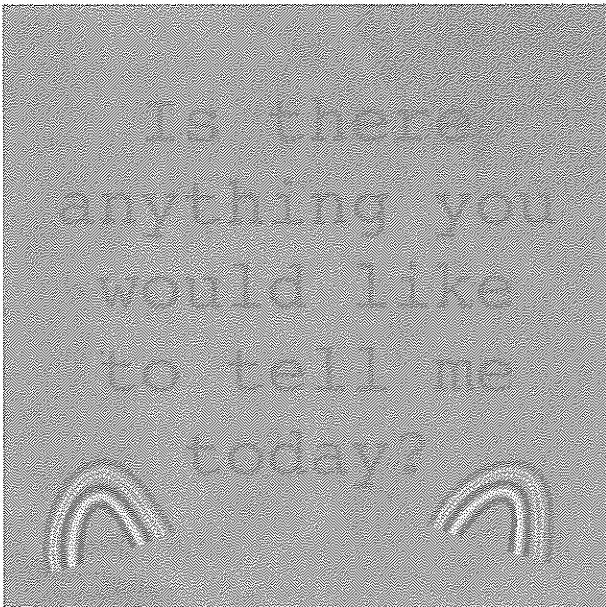
Mark only one oval.

- ☐ Happy
☐ Sad
☐ Angry
☐ Sick
☐ Anxious
☐ Afraid

3. Why are you feeling that way today? Is there anything your teacher can do to help? *

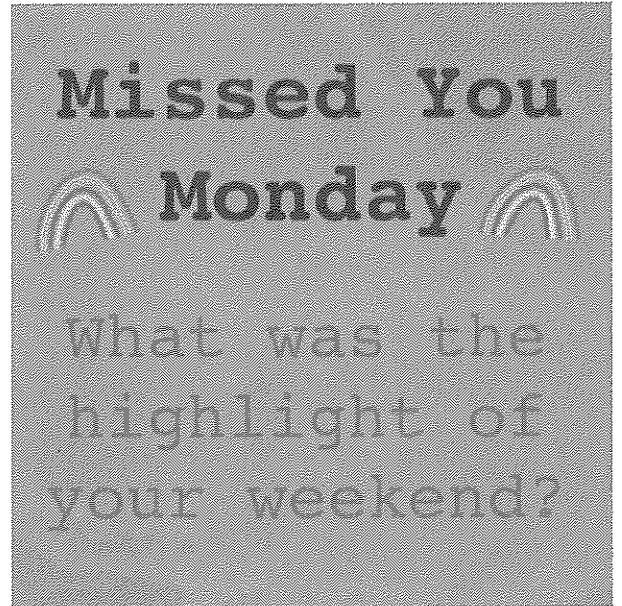
.....

5.



.....

Let's have a fantastic day!!!



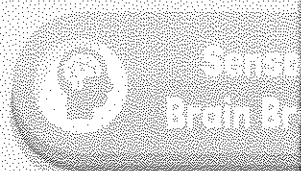
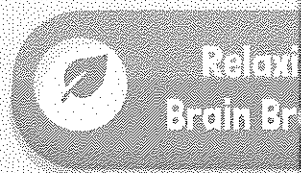
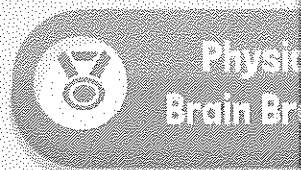
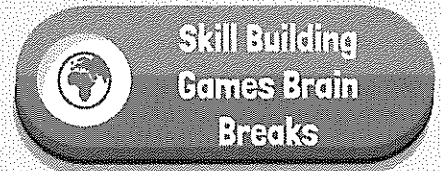
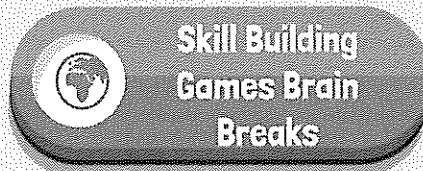
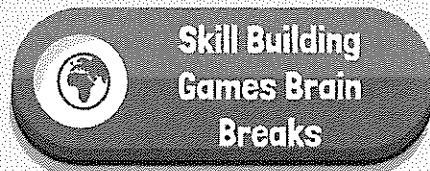
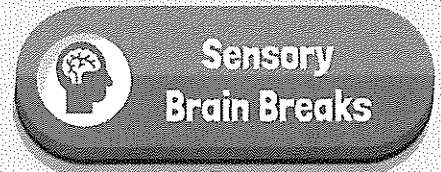
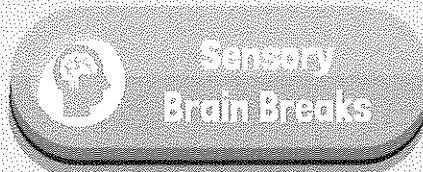
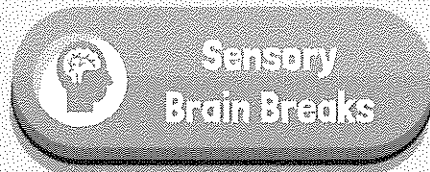
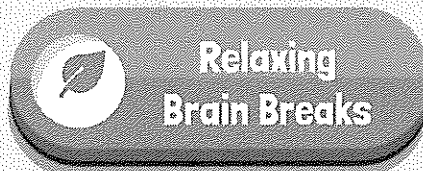
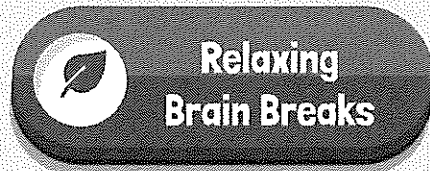
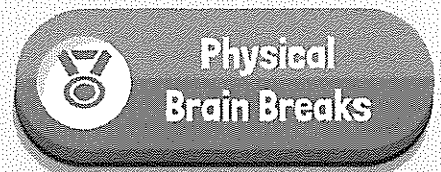
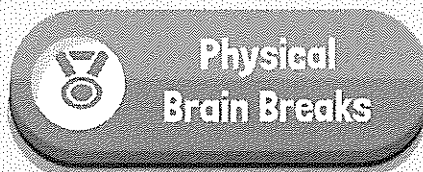
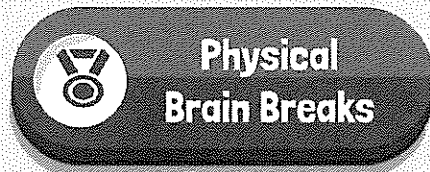
.....

Brain Breaks

Start!

Type in the Brain Break that you chose:

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 5					



Physical Brain Breaks



These brain breaks are designed to get you up and moving. Have fun and burn off some energy so you can stay focused when working.

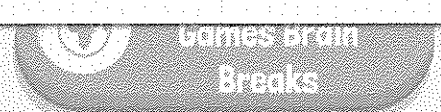
Get up and dance! Choose from one of these links to dance and groove:

<https://youtu.be/TUVcZfQe-Kw>, <https://youtu.be/LOX03zRorQk>,
<https://youtu.be/qohyYWKXFOQ>, <https://youtu.be/CRuOOxF-ENQ>,
https://youtu.be/8_YCbPbV-CM, https://youtu.be/pok8H_KF1FA

Action Songs! Choose from any Gonoodle Guided Dance Routine:

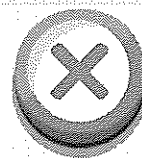
<https://www.gonoodle.com/tags/oYZOG2/guided-dance>

Cardio Workout! Can you make it to the end?: <https://youtu.be/5if4ciO5nxo>





Physical Brain Breaks



These brain breaks are designed to get you up and moving. Have fun and burn off some energy so you can stay focused when working.

Balloon Volleyball: All you need for this brain break is a balloon! Ask a sibling or grown up to play this one with you, then take turns passing it back and forth without letting it touch the ground. For a challenge, add an extra balloon and see if you can pass them both at the same time.

Obstacle Course: Create one in your backyard, make it as challenging and as long as you like!

Skipping / Jumping: If you have a trampoline or skipping rope, try to skip or jump (or both) for 10 mins without stopping

Take your dog for a walk: Remember to ask a grown up to go with you and stay within your suburb.

Games Brain
Breaks

Games Brain
Breaks

Games Brain
Breaks

Physical Brain Breaks



These brain breaks are designed to get you up and moving. Have fun and burn off some energy so you can stay focused when working.

Brain Tricks: Try some action-based brain tricks. For example, try to pat your head while rubbing your stomach. More great ones here:

<https://www.youtube.com/playlist?list=PLAwOTEIXH-cPrIZqBv2cpisUCe2gzrwTJ>

Exercise challenges: Work your way through these!

<https://www.youtube.com/channel/UCq66zBWz7bQOXAw31MdtPCQ>

Physical
Brain Breaks

Relaxing
Brain Breaks

Sensory
Brain Breaks

Skill Building
Games Brain
Breaks

Games Brain
Breaks

Games Brain
Breaks



Physical
Brain Breaks



Relaxing
Brain Breaks

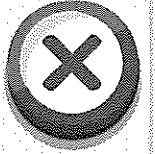


Sensory
Brain Breaks



Skill Building
Games Brain
Breaks

Relaxing Brain Breaks



These brain breaks can help you calm down and reset your energy. They're especially helpful if you are starting to feel stressed.

Yoga: Get your body moving, while also learning to relax and practice mindfulness. Yoga can be a huge stress reliever for all ages:

<https://www.youtube.com/user/CosmicKidsYoga>

Calming music: Listen to a relaxing song to unwind. Here are some ideas from Mindful Kids <https://www.youtube.com/channel/UCwHO92Tu97JWHzl3RmadNug>.



Relaxing Brain Breaks



These brain breaks can help you calm down and reset your energy. They're especially helpful if you are starting to feel stressed.

Coloring: Color a picture or draw a picture. This is a relaxing way to get creative juices flowing.

Directed Drawing: Relax and draw anything of your choice or choose something from here: <https://www.youtube.com/channel/UC5XMF3Inoi8R9nSI8ChOsdQ>



Breaks

Breaks

Breaks

Relaxing Brain Breaks



These brain breaks can help you calm down and reset your energy. They're especially helpful if you are starting to feel stressed.

Toy Competition Artwork: Design your toy for the EPS Toy Competition. Go here to see some that have been created already <https://www.budsies.com/reviews/>

Deep Breathing Exercises: this will instantly help you relax and relieve stress so you can feel ready to take on your next task: https://youtu.be/Bk_qU7l-fcU

Physical
Brain Breaks

Relaxing
Brain Breaks

Sensory
Brain Breaks

Skill Building
Games Brain
Breaks

Breaks

Breaks

Sensory Brain Breaks



Fresh air is always encouraged! Stepping outside for a few minutes can make a bigger difference than you'd think.

Playdoh: build something new or just squish some playdough around.

Here is a great recipe

<https://www.iheartnaptime.net/play-dough-recipe/>

Physical
Brain Breaks

Relaxing
Brain Breaks

Sensory
Brain Breaks

Skill Building
Games Brain
Breaks

Sensory Brain Breaks

Fresh air is always encouraged! Stepping outside for a few minutes can make a bigger difference than you'd think.

Make a sensory bottle: You can put anything in it you like. Here is one suggestion:

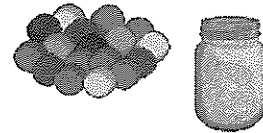
Summer Colour Explosion Sensory Bottle

You will need:

Pom-poms
Glitter
Glycer glue
Water
Small or medium sized bottle
Small sea shells or sea creatures

Method

1. Add water to your bottle about $\frac{1}{2}$ full.
2. Squeeze the glycer glue into the bottle.
3. Add some loose glitter to the bottle.
4. Add the pom-poms, sea creatures and any other brightly coloured squishy objects you can find.
5. When you have finished adding your objects, fasten the lid on the bottle tightly and shake it with strong glue.



Sensory Brain Breaks

Fresh air is always encouraged! Stepping outside for a few minutes can make a bigger difference than you'd think.

Scavenger Hunt - create a list and find them in your house, or use the one on this slide

Indoor Scavenger Hunt

How many of these items can you find around the house?

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> stuffed bear | | <input type="checkbox"/> flashlight | |
| <input type="checkbox"/> paper airplane | | <input type="checkbox"/> mug or cup | |
| <input type="checkbox"/> random sock | | <input type="checkbox"/> keys | |
| <input type="checkbox"/> sunglasses | | <input type="checkbox"/> alarm clock | |
| <input type="checkbox"/> book | | <input type="checkbox"/> measuring tape | |
| <input type="checkbox"/> crayon | | <input type="checkbox"/> ball of any sort | |
| <input type="checkbox"/> toy truck | | <input type="checkbox"/> scarf | |
| <input type="checkbox"/> potted plant | | <input type="checkbox"/> building blocks | |
| <input type="checkbox"/> ruler | | <input type="checkbox"/> baby doll | |
| <input type="checkbox"/> toothpaste | | <input type="checkbox"/> salt and pepper | |

Physical
Brain Breaks

Relaxing
Brain Breaks

Sensory
Brain Breaks

Skill Building
Games Brain
Breaks

Physical Brain Break

Physical Brain Break

Physical Brain Break

Skill Building Games Brain Breaks

With these brain breaks, you can still learn and develop new skills. Your brains will still get a break when you switch the focus to a new activity.

Puzzles: start a new puzzle and work on it or cut up a picture to make your own puzzle

Secret Handshake: Create a secret handshake

Relax Brain Break

Sense Brain Break

Skill Building Games Brain Break

Physical Brain Breaks

Physical Brain Breaks

Physical Brain Breaks

Skill Building Games Brain Breaks

With these brain breaks, you can still learn and develop new skills. Your brains will still get a break when you switch the focus to a new activity.

Write a story from a story starter
<http://www.scholastic.com/teachers/story-starters/index.html>

Brain Teasers:
<https://www.squiglyplayhouse.com/BrainTeasers/CleverBrainTeasers.php>

Physical Brain Breaks

Physical Brain Breaks

Physical Brain Breaks



Physical



Physical



Physical
Brain Breaks

Skill Building Games Brain Breaks



With these brain breaks, you can still learn and develop new skills. Your brains will still get a break when you switch the focus to a new activity.

Learn a new language: there are lots of apps to help you

Learn how to juggle: <https://youtu.be/QxzSHRbLAX4>

Alphabet Game: Choose a category (ex. movies, food, jobs etc.), then try to think of a word from the topic for every letter of the alphabet

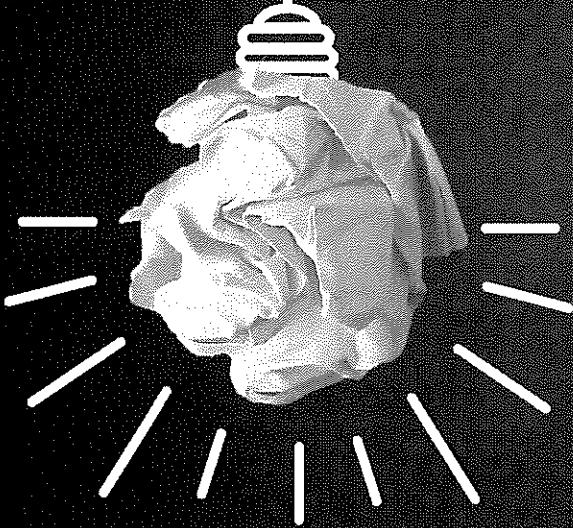
Relaxing
Brain Breaks

Sensory
Brain Breaks

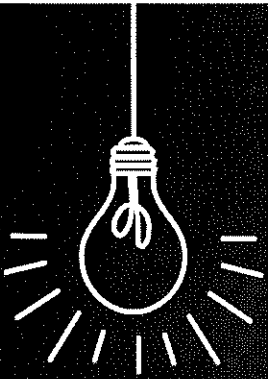
Skill Building
Games Brain
Breaks

DAILY 5

Week 5



YOU WILL FIND
ALL THE SLIDES
YOU NEED FOR
DAILY 5 HERE!



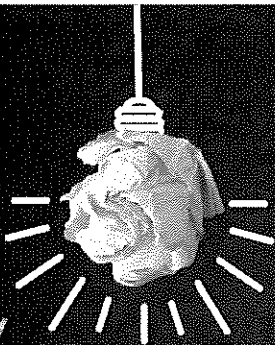
ACTIVITIES CHECKLIST

	MONDAY	TUESDAY	WEDNESDAY
Spelling (Do every day)			
Work on Writing (Once for 20 mins)			
Read to Self (3 times for 15 minutes)			
Listen to Reading (Once a week)			
Read to Someone (Twice a week)			



Move the tick mark when you have completed an activity!

SPELLING



Monday

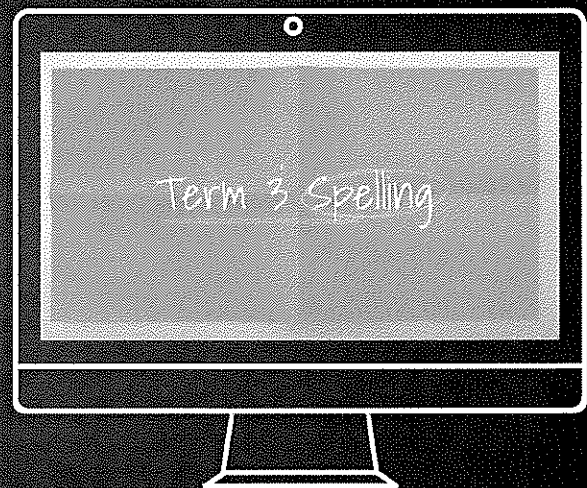
1. Read the rule
2. Type and check list words
3. Complete Phonological Activity

Tuesday

1. Type and check list words
2. Complete Morphemic Activity

Wednesday

1. Type and check list words
2. Complete Etymological activity

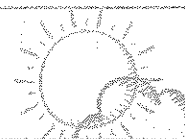


Week 5

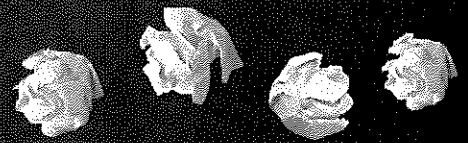
Phonological	<u>/j/ sound</u> When g is followed by e or i it usually makes a soft g sound. Sometimes g before e or i makes a hard g sound
Morphemic	Some words add -th to make the noun form which shows action or quality. The vowel or vowels sometimes change.
Etymological	Milli / mille (Latin) → thousandth Kilo (Greek) → thousand

Week 5

HFW or SW	Phonological	Morphemic	Etymological	Theme	Extension
some then were what will	digit general apology tragedy language	filth sloth truth stealth birth	kilogram millimetre kilometre millimetre milligram	conflict impact navigation significance environment	trifling agreeable aspiration admirable dishevelled



Type your Monday list here...



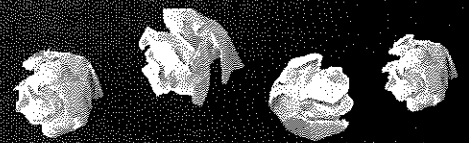
T3 W5 Phonological spelling activities

Put the words into the correct column.

great	angry
genius	ginger
bandage	merge
together	giant
goat	glue
agree	fringe
large	girl
gear	stranger
gypsy	apology
good	gate

Soft g	Hard g

Type your Tuesday list here...



T3 W5 Morphemic spelling activities

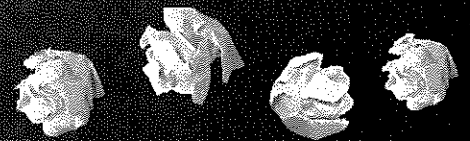
Complete the table.

<u>VERB</u>	<u>NOUN</u>
warm	
grow	
length	
	strength
bear	

<u>ADJECTIVE</u>	<u>NOUN</u>
foul	
slow	
true	
steal	
young	

Fun fact: Month came from the word moon. A month was the time between a new moon to the next. Usually 29.5 days to occur.

Type your Wednesday list here...



T3 W5 Etymological activity

Match the definitions with the word. Can you think of examples?

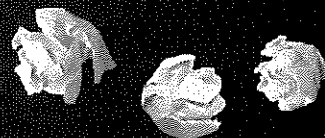
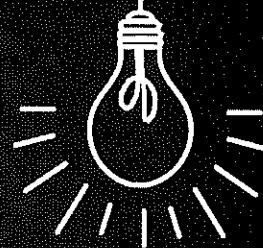
1. kilogram 2. millimetre 3. kilometre 4. millilitre 5. milligram

- 1000 metres.
- One thousandth of a metre.
- 1000 grams.
- One thousandth of gram.
- One thousandth of a litre.

WORK ON WRITING

Write for 20 minutes.

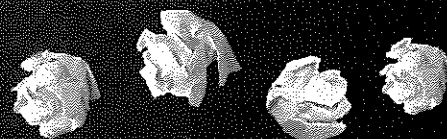
YuumeiArt.com



WORK ON WRITING

Write for 20 minutes.

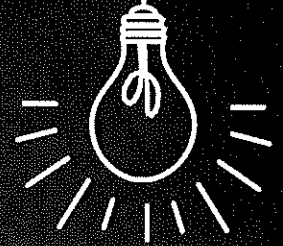
Type here...



READ TO SELF

Read three times for 15 minutes.
After each time you read record the details on the table.

READING LOG

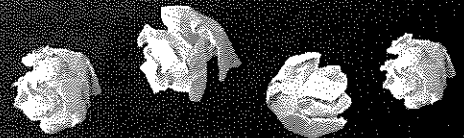


DATE	TITLE	AUTHOR	PAGES READ

SLIDESMANIA.COM

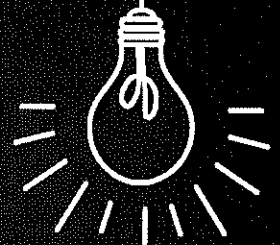


You can type on the slide or rule the table in your book!

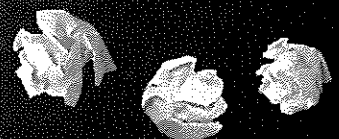


READ TO SELF

Read three times for 15 minutes.
After each time you read choose an activity to complete.

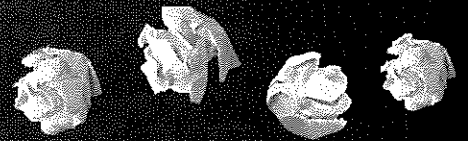


<input checked="" type="checkbox"/> Sequence the events in the story. Make sure to include the important parts in detail.	<input checked="" type="checkbox"/> What connections can you make between your life and the book? Explain.	<input checked="" type="checkbox"/> From what you have read so far, what prediction can you make? What makes you think that will happen next?
<input checked="" type="checkbox"/> If you could step into this story, what is the first thing you would do?	<input checked="" type="checkbox"/> Write a letter to a character in the book. What would you say to that character?	<input checked="" type="checkbox"/> Explain a character's problem and then offer that character your advice on how to solve his/her problem.
<input checked="" type="checkbox"/> Choose one character and explain why you would or would not want to have him/her as a friend in real life.	<input checked="" type="checkbox"/> Describe the setting(s) in the story. Can you make any connections to the place(s)?	<input checked="" type="checkbox"/> Explain what you feel is the theme of the story. Support your thinking using evidence from the book.



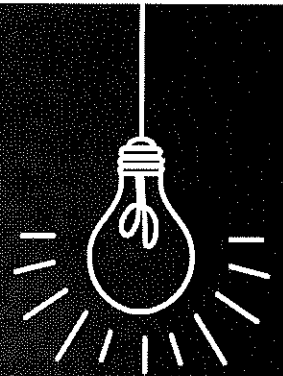
READ TO SELF ACTIVITIES

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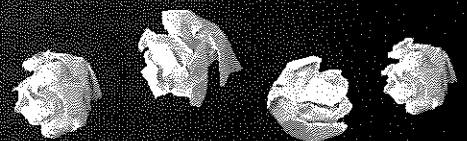


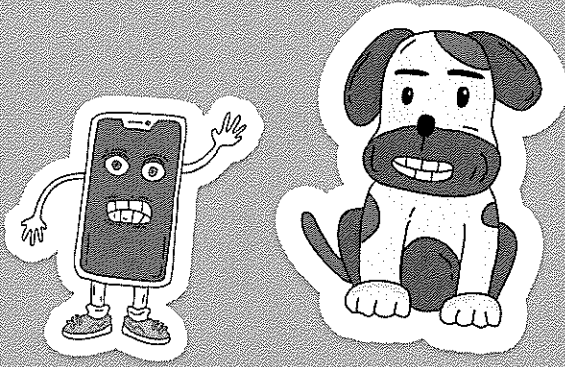
LISTEN TO READING

On the next slide listen to the podcast. On this slide write a summary of what it was about.



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Cameras: From Pinholes to Perfect Selfies

Did you know that the ancestor of our smartphone cameras was just a box with a tiny hole in it?

31:17

[Click Me](#)

READ TO SOMEONE

Choose someone (or something - your pet!) to read a passage to.

Earthworms

The earthworm is more than fish bait and bird food. They are nature's workman. Earthworms improve soil for humans, plants and animals. The tunnels they create help air and water reach deeper parts of the soil. More air and more water make for a healthier soil.

Did you know the diet of an earthworm is the dirt itself? These worms eat the soil they live in. This food source is great for the worm but not for plants. The waste released by the worm is then used to feed the plants because it has a lot of nutrients.

If you were to look really closely at the earthworm's body it looks like they are joined together with rings. They are actually put together with about 150 different segments. This helps the worm to move as each segment has muscles and bristles. The bristles are what give the worm control when moving through the soil. The different segments to the earthworm are also why they can survive and regrow parts of their body back if something pulls it apart.

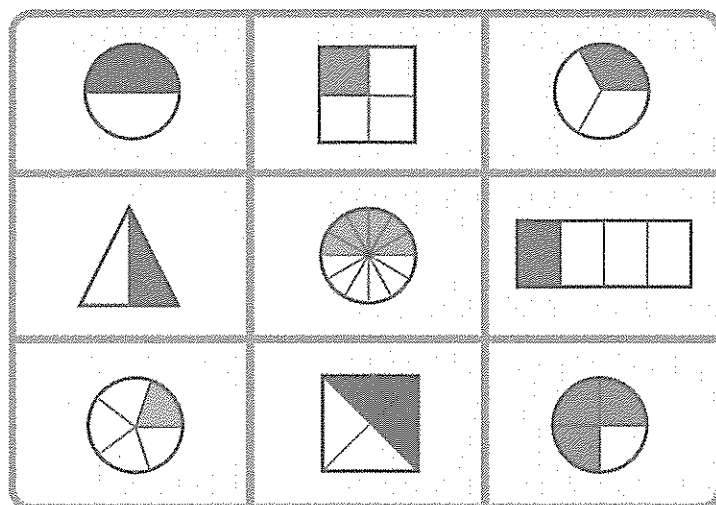
Earthworms have no lungs to help them breathe. Instead they breathe through their skin. This is the reason they must stay in moist damp places. Their skin cannot dry out or they will not survive.

Aliens in the Water

The aliens took care with their appearance trying to morph their features into human ones. They could not afford to get caught. The human race did not know about their existence and it was essential that they never did. They boarded their space ship and set the coordinates to earth. It was a big day. They were finally going to visit the earthlings they had been watching for so long. They had to be careful not to get caught. The ship passed sailed into earth's atmosphere and hovered above the large body of water. The aliens could not suppress their excitement. They turned on the invisibility shield to hide the ship and dove into the water. All of the humans in the water welcomed them. They fit right in. Their fins and scales looked just like everyone else's. The aliens spent the day learning how the humans swam, the food they ate and how they played with one another. When it was time to leave they saw strange creatures in a floating ship above the water. The aliens watched as these creatures captured their human friends and haul them into the boat. The aliens did not want to be captured and they left earth deciding never to return.

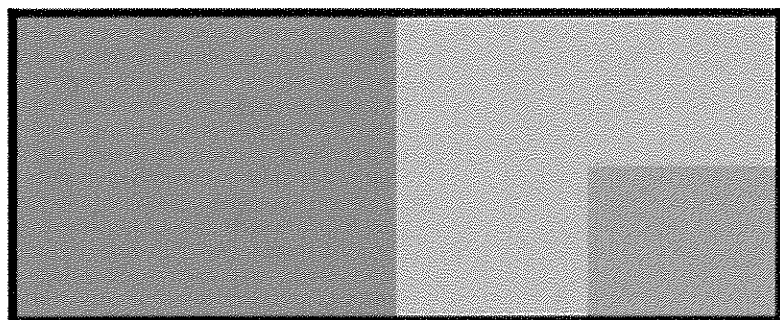


Fractions and Decimals



Monday Week 5 Lesson 1

Ignition/Warm Up



What fraction of the space is occupied by each colour?

Think carefully about your answer and how you can justify it.

Learning Intention

We are learning to add and subtract a proper fraction from another proper fraction with the same denominator and multiply simple fractions by whole numbers using repeated addition.

Success Criteria

- I can identify different parts and types of fractions.
- I can add and subtract proper fractions.
- I can use repeated addition to multiply fractions.
- I can express improper fractions as mixed numerals.

Vocabulary

numerator

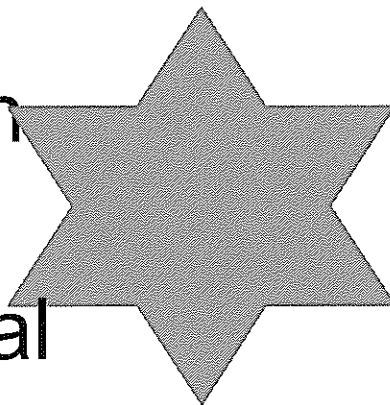
proper fraction

whole number

mixed numeral

twelfth

denominator



What are fractions?

Fractions represent **equal parts** of a whole or a collection.

The word 'fraction' has been derived from the Latin 'fractus' which means "broken".

What are features of fractions?

Each fraction is worth a different amount depending on the number of the numerator and denominator.

5 ← numerator

12 ← denominator

What are the different types of fractions?

Proper fractions:
the numerator is
SMALLER than the
denominator.

$$\frac{8}{12}$$

Improper fractions:
the numerator is
BIGGER than the
denominator.

$$\frac{5}{2}$$

Mixed numerals:
there are
both whole numbers
and proper
fractions.

$$4\frac{2}{5}$$

My turn

Adding fractions with the same denominator

Add. Simplify the answer.

$$\frac{3}{15} + \frac{7}{15}$$

▶ 0:00 / 3:17



Subtracting fractions with the same denominator

Subtract. Simplify the answer.

$$\frac{8}{18} - \frac{5}{18}$$

We're asked to subtract and simplify the answer, and we

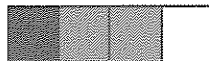
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Adding or subtracting fractions with the same denominator by drawing diagrams

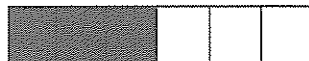
W
B

a. $\frac{1}{4} + \frac{2}{4}$



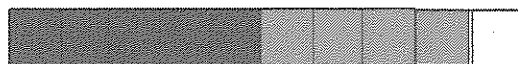
W
A

b. $\frac{5}{6} - \frac{2}{6}$



W
E

c. $\frac{5}{1} + \frac{4}{1}$



Our turn

Adding or subtracting fractions with the same denominator

W
B

a. $\frac{1}{2} + \frac{1}{2}$

b. $\frac{1}{4} + \frac{2}{4}$

c. $\frac{7}{8} - \frac{4}{8}$

W
A

d. $\frac{2}{3} + \frac{2}{3}$

e. $\frac{3}{5} + \frac{4}{5}$

f. $\frac{5}{6} - \frac{2}{6}$

W
E

g. $\frac{7}{1} + \frac{9}{1}$

h. $\frac{5}{1} + \frac{1}{1}$

i. $\frac{11}{12} - \frac{8}{12}$

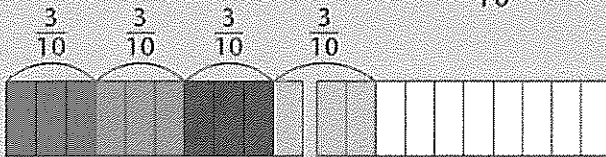
My turn

Multiplying fractions by a whole number

Fractions can be multiplied by whole numbers using repeated addition.

i.e. $4 \times \frac{3}{10} = \frac{3}{10} + \frac{3}{10} + \frac{3}{10} + \frac{3}{10}$

Example: Four people were given $\frac{3}{10}$ of a chocolate bar.



$$4 \times \frac{3}{10} = \frac{3}{10} + \frac{3}{10} + \frac{3}{10} + \frac{3}{10} = \frac{12}{10} = 1\frac{2}{10}$$

Another way of multiplying a fraction by a whole number is to multiply the numerator by the whole number and divide the answer by the denominator.

E.g. $4 \times \frac{2}{5} = \frac{4 \times 2}{5} = \frac{8}{5} = 1\frac{3}{5}$

Multiplying fractions by a whole number

1. Use repeated addition to solve these problems

	Question	Repeated addition	Answer
a	$4 \times \frac{6}{10}$	$\frac{6}{10} + \frac{6}{10} + \frac{6}{10} + \frac{6}{10}$	$\frac{24}{10}$ or $2\frac{4}{10}$
b	$2 \times \frac{4}{5}$		
c	$3 \times \frac{5}{6}$		
d	$3 \times \frac{7}{10}$		
e	$5 \times \frac{2}{3}$		
f	$3 \times \frac{3}{4}$		
g	$4 \times \frac{5}{6}$		
h	$3 \times \frac{9}{10}$		

2. Use multiplication to solve these problems and write them as a mixed numeral.

a $5 \times \frac{1}{4} = \frac{5 \times 1}{4} = \frac{5}{4} = 1\frac{1}{4}$

b $3 \times \frac{1}{2} = \quad = \quad =$

c $3 \times \frac{2}{3} = \quad = \quad =$

d $2 \times \frac{3}{5} = \quad = \quad =$

e $4 \times \frac{2}{5} = \quad = \quad =$

f $3 \times \frac{3}{5} = \quad = \quad =$

g $4 \times \frac{3}{5} = \quad = \quad =$

Activity

Yellow/Green

Create 10 addition and subtraction problems involving fractions, draw a diagram to show how you solve them. E.g.

$$\frac{2}{5} + \frac{1}{5} = \frac{4}{5}$$

$$\frac{3}{4} + \frac{2}{4} = \frac{5}{4} = 1\frac{1}{4}$$

Activity

Blue/Purple

4 a $\frac{7}{8} + \frac{7}{8} + \frac{7}{8}$

b $\frac{3}{4} + \frac{3}{4} + \frac{3}{4}$

c $\frac{5}{8} + \frac{5}{8} + \frac{5}{8} + \frac{5}{8}$

d $\frac{5}{6} + \frac{5}{6} + \frac{5}{6}$

e $\frac{7}{10} + \frac{7}{10} + \frac{7}{10}$

f $\frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3}$

5 a $3 \times \frac{5}{8}$

b $2 \times \frac{3}{5}$

c $4 \times \frac{3}{4}$

d $5 \times \frac{2}{3}$

e $6 \times \frac{5}{8}$

f $4 \times \frac{3}{5}$

g $8 \times \frac{3}{4}$

h $10 \times \frac{2}{3}$

PROBLEM INVESTIGATION

2 Solve these problems using your own strategies.

- a How many oranges did the tennis players eat if each of the 4 players ate $\frac{3}{4}$ of an orange?
- b How many packets of swap cards do the girls have if each of the 5 girls has $\frac{3}{5}$ of a set?
- c How many litres of milk does Jasmine drink per week if she buys a $\frac{1}{2}$ litre carton every day?
- d How many packets of Washo did the 5 campers use if the manager gave them a $\frac{1}{4}$ packet each?

- e How many pizzas did the 6 children eat if each person ate $\frac{3}{8}$ of a pizza?
- f How many red pens are there if 1 out of every 3 pens in the pack of 15 was red?
- g How many kilograms of potatoes did Dad buy if he bought six $\frac{1}{2}$ kg bags?
- h $\frac{5}{12}$ of the eggs were broken. How many broken eggs were there if there were 4 dozen eggs?

What's Our Play on History?

Team Name:	
Challenge Number:	

Person/Place/Event	Clue Number	Clue Number	Clue Number	Clue Number	Clue Number	Clue Number

Person/Place/Event	Clue Number	Clue Number	Clue Number	Clue Number	Clue Number	Clue Number

Person/Place/Event	Clue Number	Clue Number	Clue Number	Clue Number	Clue Number	Clue Number

Person/Place/Event	Clue Number	Clue Number	Clue Number	Clue Number	Clue Number	Clue Number

What's Our Play on History?

Solve the 24 clues and discover what historic Australian person, place or event the clues belong to.

1.	I was born on 27th May 1815 and am the youngest of the seven children.
2.	In my early years, I provided accommodation for convicts and female immigrants.
3.	I come from the Bidjigal clan from the Botany Bay area of Sydney.
4.	It is a common misconception and did not give Aboriginal and Torres Strait Islander peoples the right to vote. This right had already been legislated for Commonwealth elections in 1962.
5.	I educated people about the duties and rights of citizens in a democracy and started a newspaper.
6.	I am located at the southern end of Macquarie Street in Sydney.
7.	In 1790, I speared a convict who killed many of my people.
8.	I am recognised on UNESCO's World Heritage list.
9.	This event happened in 1967.
10.	Before this Aboriginal and Torres Strait Islander people weren't recognised as part of the Australian population.
11.	Growing up to support my family, I worked in both a rope factory and brick factory and built roads.
12.	I was a great Aboriginal warrior who led war against the British at Sydney Cove from 1788 to 1802.
13.	I was built by convicts and was the first of my kind in the colony.
14.	My campaign slogan was "Right Wrongs Write Yes for Aborigines".
15.	As many as 1400 people lived here at one single time and people slept on canvas hammocks.
16.	After my death, my head was placed in the Museum of the Royal College of Surgeons.
17.	In my later years of life I had a very long, white beard and white hair to match.
18.	I became a 'carradhy', commonly known as a "clever man" within Indigenous Australian culture.
19.	The only way that you can change the Australian Constitution is by holding one of these.
20.	90.77 per cent of Australian voters voted 'Yes' to the changes.
21.	I made a famous speech in Tenterfield and declared that the colonies should form a strong new nation.
22.	In search of a better life, my wife and I took the long voyage in a sailing ship to Sydney and arrived in 1839.
23.	I was wanted dead or alive and shot dead in 1802. My head was sent to England to signal my death.
24.	My designer, a convict architect, was granted a full pardon for his crimes by Governor Macquarie.

Challenge Number: 2

Tuesday Check-In

Good Morning! Happy Tuesday!

*Required

1. Name *

.....

2. How are you feeling this morning? *



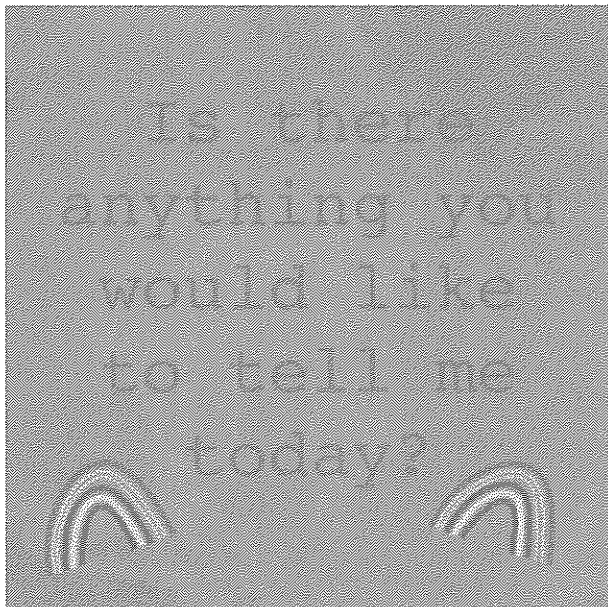
Mark only one oval.

- ☐ Happy
☐ Sad
☐ Angry
☐ Sick
☐ Anxious
☐ Afraid

3. Why are you feeling that way today? Is there anything your teacher can do to help? *

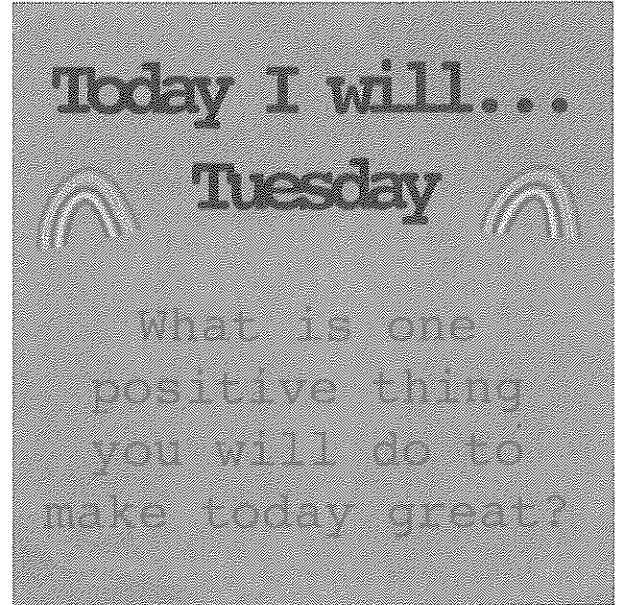
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5.



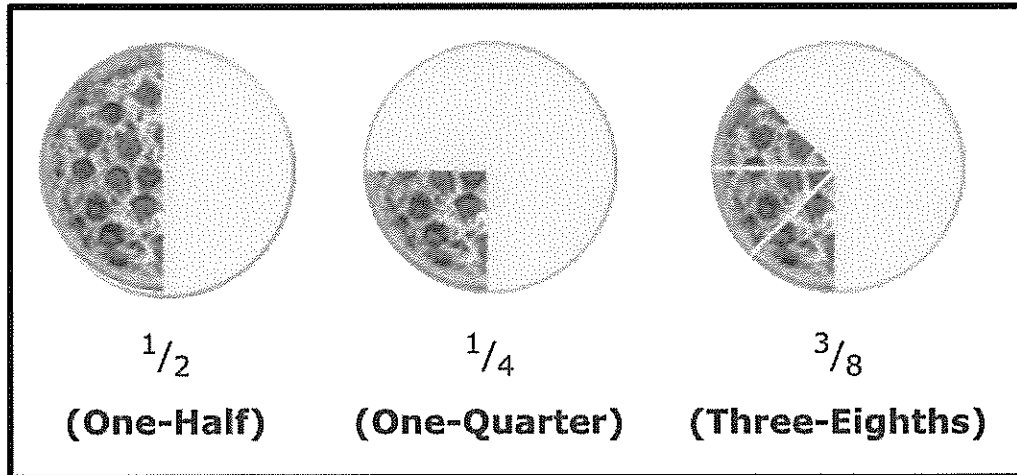
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Let's have a fantastic day!!!



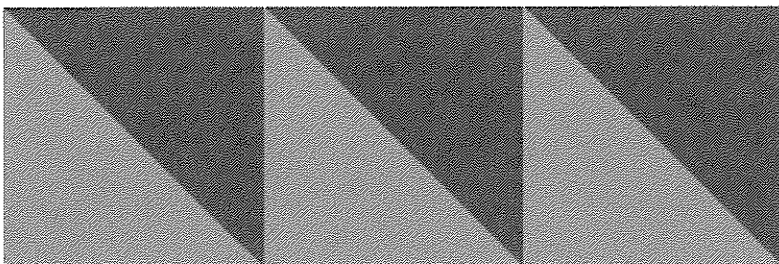
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Fractions and Decimals



Tuesday Week 5 Lesson 2

Ignition/Warm Up



What fraction of the space is occupied by each colour?

Think carefully about your answer and how you can justify it.

Learning Intention

We are learning to add and subtract mixed numerals with the same denominator and calculate unit fractions of collections.

Success Criteria

I can describe the different parts and types of fractions.
I can add and subtract mixed numerals and proper fractions.
I can find fractional amounts of a number.

Vocabulary

numerator

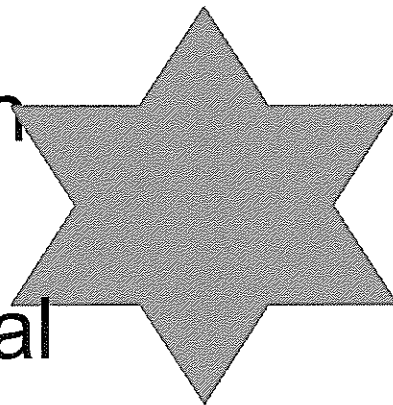
proper fraction

whole number

mixed numeral

twelfth

denominator



What are fractions?

Fractions represent **equal parts** of a whole or a collection.

The word 'fraction' has been derived from the Latin 'fractus' which means "broken".

What are features of fractions?

Each fraction is worth a different amount depending on the number of the numerator and denominator.

5 ← numerator

12 ← denominator

What are the different types of fractions?

Proper fractions:
the numerator is
SMALLER than the
denominator.

$$\frac{4}{6}$$

Improper fractions:
the numerator is
BIGGER than the
denominator.

$$\frac{5}{4}$$

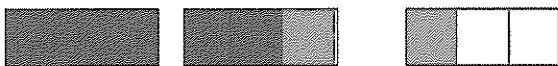
Mixed numerals:
there are
both whole numbers
and proper
fractions.

$$2\frac{3}{7}$$

My turn

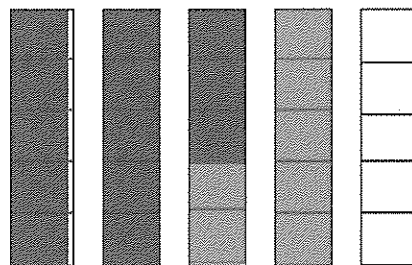
Adding mixed numerals with the same denominator

$$1\frac{2}{3} + \frac{2}{3} = 2\frac{1}{3}$$



Hint: 1 whole = $\frac{3}{3}$

$$2\frac{3}{5} + 1\frac{2}{5} = 4$$



Hint: 2 whole = $\frac{10}{5}$

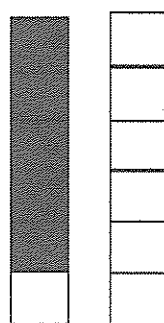
Subtracting mixed numerals with the same denominator

$$1 - \frac{2}{4} = \frac{2}{4}$$



Hint: 1 whole = $\frac{4}{4}$

$$1\frac{3}{6} - \frac{4}{6} = \frac{5}{6}$$



Hint: 1 whole = $\frac{6}{6}$

Adding or subtracting mixed numerals with the same denominator by drawing diagrams

W
B

a. $1\frac{2}{4} + \frac{3}{4}$

W
A

b. $1\frac{2}{5} - \frac{3}{5}$

W
E

c. $\frac{7}{1} + \frac{8}{1}$

Our turn

Adding or subtracting mixed numerals with the same denominator

W
B

a. $1 - \frac{3}{4}$

b. $\frac{3}{4} + \frac{2}{4}$

c. $2 - \frac{7}{8}$

W
A

d. $1\frac{2}{3} + 1\frac{1}{3}$

e. $\frac{5}{6} + 2\frac{2}{6}$

f. $1\frac{2}{6} - \frac{4}{6}$

W
E

g. $1\frac{9}{11} + 3\frac{6}{11}$

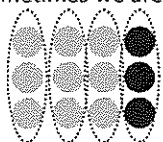
h. $2\frac{8}{11} + 4\frac{3}{11}$

i. $3\frac{4}{12} - 2\frac{8}{12}$

My turn

Multiplying fractions by a whole number

Sometimes we are asked to find the fraction of an amount such as:



Find one quarter of this array.

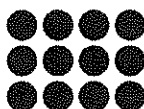
There are 12 dots in the array.

First we divide the array into 4 equal parts.

There are 3 dots in each part or quarter so one quarter of 12 is 3.

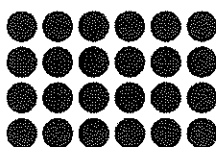
3 Use the arrays to help find the given fractions of the groups:

a. $\frac{1}{3}$ of this array is _____ dots



$\frac{1}{6}$ of this same array is _____ dots

b. $\frac{1}{4}$ of this array is _____ dots



$\frac{1}{6}$ of this same array is _____ dots

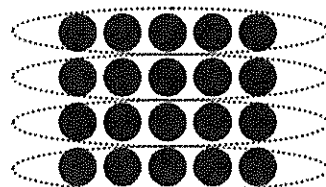
Multiplying fractions by a whole number

There is another way to find fractions of amounts:

What is $\frac{1}{4}$ of 20?

20 divided into 4 groups is 5 in each group

$$20 \div 4 = 5$$



Once we know how to find one part of a group, we can use this to find other amounts:

To find $\frac{2}{3}$ of 9, we first find $\frac{1}{3}$ of 9 $\longrightarrow 9 \div 3 = 3$ $\frac{1}{3}$ of 9 = 3

$\frac{2}{3}$ of 9 is 2 times this $\longrightarrow 2 \times 3 = 6$ $\frac{2}{3}$ of 9 = 6

Calculate fractions of an amount

Find the fraction of an amount by:

- 1. Divide the amount by the DENOMINATOR**
- 2. Multiply that answer by the NUMERATOR**

E.G. $\frac{1}{5}$ of 15 =

$$15 \div 5 = 3$$

$$3 \times 1 = 3$$

$$\frac{1}{5} \text{ of } 15 = 3$$

E.G. $\frac{2}{6}$ of 24 =

$$24 \div 6 = 4$$

$$4 \times 2 = 8$$

$$\frac{2}{6} \text{ of } 24 = 8$$

Multiplying fractions by a whole number

Find the fractional amounts. Use the space below to work out the different steps:

a What is $\frac{2}{5}$ of 20?

$$20 \div 5 = \boxed{}$$

$$2 \times \boxed{} = \boxed{}$$

$$\frac{2}{5} \times 20 = \boxed{}$$

b What is $\frac{3}{4}$ of 12?

$$12 \div 4 = \boxed{}$$

$$3 \times \boxed{} = \boxed{}$$

$$\frac{3}{4} \times 12 = \boxed{}$$

c What is $\frac{2}{3}$ of 18?

$$18 \div 3 = \boxed{}$$

$$2 \times \boxed{} = \boxed{}$$

$$\frac{2}{3} \times 18 = \boxed{}$$

Multiplying fractions by a whole number

- 1 Warm up with this puzzle. Use division to find the answer to each clue. The solved puzzle will tell you the name of a very important day of the year.

$$\frac{\boxed{}}{2} \quad \frac{\boxed{}}{11} \quad \frac{\boxed{}}{25} \quad \frac{\boxed{}}{4} \quad \frac{\boxed{}}{9}$$

$$\frac{\boxed{}}{3} \quad \frac{\boxed{}}{8} \quad \frac{\boxed{}}{5} \quad \frac{\boxed{}}{75} \quad \frac{\boxed{}}{10}$$

$$\frac{\boxed{}}{9} \quad \frac{\boxed{}}{8} \quad \frac{\boxed{}}{50}$$

$$L = \frac{1}{4} \text{ of } 16$$

$$Y = \frac{1}{2} \text{ of } 100$$

$$A = \frac{1}{12} \text{ of } 96$$

$$D = \frac{1}{7} \text{ of } 63$$

$$O = \frac{1}{2} \text{ of } 22$$

$$S = \frac{1}{100} \text{ of } 1000$$

$$H = \frac{1}{4} \text{ of } 300$$

$$T = \frac{1}{11} \text{ of } 55$$

$$M = \frac{1}{3} \text{ of } 9$$

$$W = \frac{1}{2} \text{ of } 4$$

$$R = \frac{1}{4} \text{ of } 100$$

Put this date in your diary! Tell your friends!



Activity

Yellow/Green

1 Solve these problems:

a $\frac{1}{3} + 2\frac{1}{3} =$

b $2\frac{3}{4} - 1\frac{2}{4} =$

c $1\frac{2}{5} + 3\frac{1}{5} =$

d $\frac{1}{5} + 6\frac{2}{5} =$

e $1\frac{3}{12} - \frac{1}{12} =$

f $7\frac{4}{12} - 3\frac{2}{12} =$

Activity

Blue/Purple

Print off this worksheet for the students to complete.

Extension:
Come up with your own
fraction code and create a
secret sentence.

Fractions of an amount

Name _____

1 What is:

a $\frac{1}{4}$ of 16

b $\frac{1}{2}$ of 100

c $\frac{1}{3}$ of 90

d $\frac{1}{7}$ of 63

e $\frac{1}{4}$ of 200

f $\frac{1}{8}$ of 96

2 What is:

a $\frac{2}{3}$ of 15

b $\frac{3}{4}$ of 20

c $\frac{2}{8}$ of 24

d $\frac{3}{10}$ of 100

e $\frac{4}{10}$ of 80

f $\frac{7}{8}$ of 56

3 What is:

a 25% of 100

b 25% of 200

c 25% of 50

d 75% of 100

e 75% of 200

f 75% of 80

PROBLEM INVESTIGATION

Express these as fraction sentences. Solve them:

- a Sarah and Rachel go to a trash and treasure sale. Sarah buys $3\frac{1}{4}$ boxes of trash and Rachel buys $2\frac{1}{4}$ boxes of treasure. How much do they buy in total?

- b You have $2\frac{3}{4}$ boxes of chocolates and you eat $1\frac{1}{4}$ boxes. How many boxes do you have left?

- c Before World Maths Day, Akhil practices Live Mathletics for $4\frac{1}{3}$ hours on Monday and $2\frac{1}{3}$ hours on Tuesday. How many hours of practice has he put in altogether?

- d Aman really gets into a sport for a while then drops it and moves on to his latest craze. As a consequence, he has five and a half cupboards of old sports equipment. His mother makes him take some of it to the local charity shop. This leaves him with 2 full cupboards. How much has he taken to the shop?

PROBLEM INVESTIGATION

The Walsh kids fight like cats and dogs over computer time and their dad has had enough. He has drawn up a schedule and says that if they don't stick to it, he will hide the keyboard till Christmas and cut off the internet. Help the kids work out their daily allocation and save them from a fate worse than death:

- a How many minutes does each kid get each day?

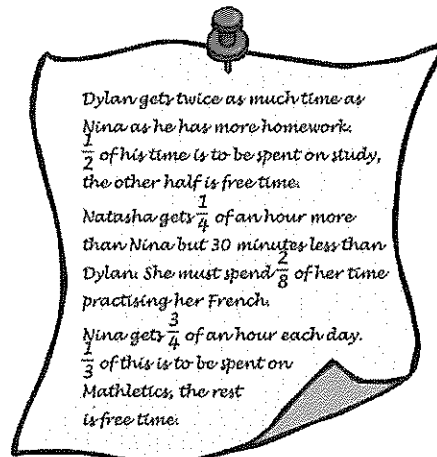
Dylan

Nina

Natasha

- b How many minutes must Dylan spend on study?

- c How many minutes will Nina spend on Mathletics?



Wednesday Check-In

Good Morning! Happy Wednesday!

*Required

1. Name *

.....

2. How are you feeling this morning? *



Mark only one oval.

- ☐ Happy
- ☐ Sad
- ☐ Angry
- ☐ Sick
- ☐ Anxious
- ☐ Afraid

3. Why are you feeling that way today? Is there anything your teacher can do to help? *

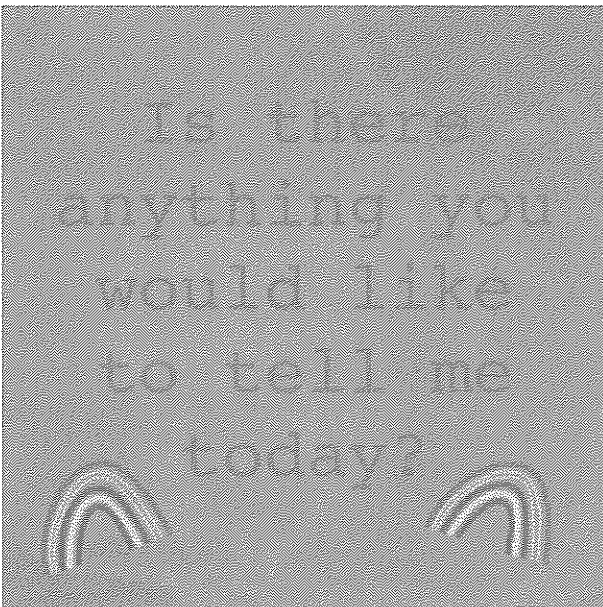
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5.

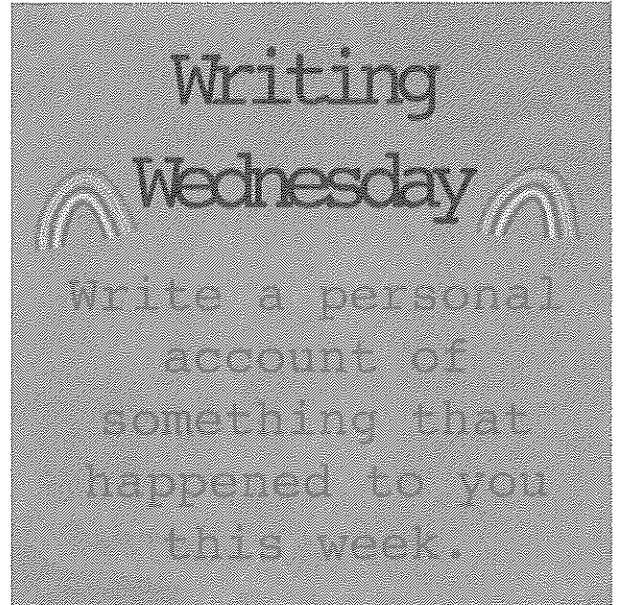


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Let's have a fantastic day!!!



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WEEK 5

HOME LEARNING

MATHEMATICS

MASS

LESSON 1

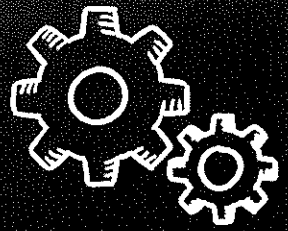
1

LEARNING INTENTIONS AND SUCCESS CRITERIA

LEARNING INTENTION	determine the net mass of the contents of a container after measuring the gross mass and the mass of the container		convert between kilograms and grams and between kilograms and tonnes	
SUCCESS CRITERIA	understand the difference between the gross mass and net mass of a container and its contents	I can calculate the net mass of the contents of a container after measuring the gross mass and mass of the container	convert between kilograms and grams and between kilograms and tonnes	convert between kilograms and grams and between kilograms and tonnes

2

WARM UP



Number Talks: Measurement Conversion

Cheryl bought 10 plums at the market. Each plum weighed 50 g. If the price for plums was \$8 per kilogram, how much did Cheryl pay?



3

MEASUREMENT

1 min: Think Pair Share

What are the common units of measurement for MASS?

What/where are some different types of scales and what are they used to measure?

– think both small and large–

What do you think that the terms net mass and gross mass mean?

4

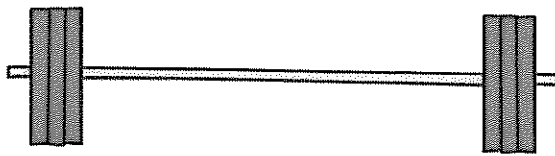
Measurement conversions

Weight

1 tonne = 1000 kilograms

1 kilogram = 1000 grams

1 gram = 1000 milligrams



www.nesbitt.co.uk

t
kg
g
mg

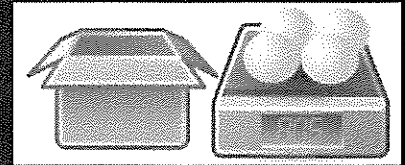
Find a group
of products
that have a
total mass of
1kg.



On which
products can
you see the
word 'NET'?

NET MASS

The weight of the contents, not including any packaging.



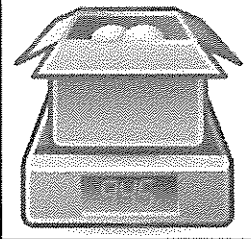
7

DOES THAT MEAN THE MASS GIVEN ON THESE ITEMS INCLUDES THE MASS OF THE CONTAINER?



8

GROSS MASS



The total weight, including contents and any packaging.



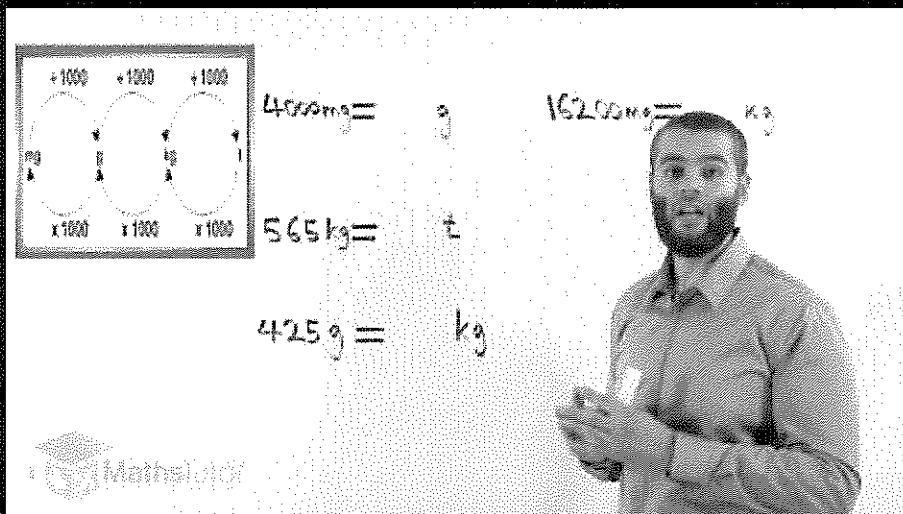
TO FIND THE NET MASS:

$\text{GROSS MASS} - \text{MASS OF THE PACKAGING} = \text{NET MASS.}$

TO FIND THE MASS OF THE PACKAGING:

$\text{GROSS MASS} - \text{NET MASS} = \text{PACKAGING.}$

CONVERTING BETWEEN UNITS OF MEASUREMENT



The whiteboard contains the following content:

- Unit Conversion Diagram:** A diagram showing the relationships between milligrams (mg), grams (g), and kilograms (kg). It consists of three circles arranged horizontally. The first circle is labeled 'mg' and has an arrow pointing to the second circle labeled 'g' with '+1000' above it. The second circle has an arrow pointing to the third circle labeled 'kg' with '+1000' above it. Below the circles, there are arrows pointing back: from 'kg' to 'g' with 'x1000' below it, from 'g' to 'mg' with 'x1000' below it, and from 'kg' to 'mg' with 'x1000' below it.
- Conversion Problems:**
 - $4000\text{mg} = \text{g}$
 - $16200\text{mg} = \text{kg}$
 - $565\text{kg} = \text{t}$
 - $425\text{g} = \text{kg}$
- Logo:** A logo for 'Maths4all' is visible in the bottom left corner of the whiteboard.

11



EXAMPLES

The bag of jellybeans weighs 65g. If the jellybeans weighed 60g, how much did the packing weigh?

A bag of rice has a net mass of 1kg. The packaging has a mass of 80g. What is the gross mass?

If my jar is 2kg and the gross mass is 6000g. What is the net mass of the items inside the jar?

12

CALCULATE THE MISSING VALUE

ITEM	GROSS MASS	PACKAGING	NET MASS
Can of Soup		15g	400g
Flour	1kg		950g
Soft Drink Bottle	410g		375g
Onions	5kg	25g	
Pringles	134g	5g	
Pallet of Bricks		10 000g	1,554 kg
Steak	600g	12g	

RECORD YOUR RESULTS IN A TABLE.

B&P – ADD COLUMNS TO RECORD THE GROSS AND NET MASS IN ANOTHER (CONVERTED) MEASUREMENT OF YOUR CHOICE (MG, G, KG, T) – SEE VIDEO

25

Gross and net mass

Builders use different types of screws to join different types of materials. Some common materials are chipboard used to make laundry cupboards, plasterboard for bedroom walls, metal for roofs, and steel for factory walls. The length and mass of these screws are recorded on this chart.







Screws	For chipboard	for plasterboard	for metal	For steel
length	20 cm	40 cm	32 cm	50 cm
mass	8 grams	6 grams	8 grams	12 grams

12 Use the information in the table above to calculate the mass of these packets of screws.

a 100 chipboard screws	g	e 25 steel screws	g
b 100 plasterboard screws	g	f 150 metal screws	g
c 200 metal screws	g	g 1000 chipboard screws	g
d 100 steel screws	g	h 500 plasterboard screws	g

Gross mass is the total mass. Net mass is the mass of the contents only.
For example, some milk bottles at the grocery store have a net mass of 1850 g but have a gross mass of 1995 g because the cardboard box it was packaged in has a mass of 195 g.

13 Solve the problems to find the gross mass.

a The cereal has a net mass of 250 g but the cardboard box that it is packaged in has a mass of 70 g. What is the gross mass of the cereal?		
b A bar of soap has a mass of 120 g. What would be the gross mass of 5 bars of soap in a cardboard box with a mass of 55 g?		
c A golf ball has a mass of 45 g. The box that they come in has a mass of 40 g. What is the gross mass of 8 golf balls packed in one box?		
d A pencil has a mass of 5 g. What would be the gross mass of a box of twelve pencils if the box has a mass of 18 g?		
e A super set of 36 pencils with a net mass of 5 g each is sold in a metal case. The case has a mass of 400 g. What is the gross mass of the pencils?		
f Rita bought 20 small apples in a cardboard box. What would the gross mass of the box of apples be if the apples averaged 200 g each and the box has a mass of 400 g?		

105

CONVERTING BETWEEN UNITS

Complete this table by writing each mass in grams and as a decimal. Remember to include the units of measurement:

Decimal Notation	Grams	Kilograms and Grams
		4 kg 250 g
	1800 g	
3.75 kg		

Convert these measurements from tonnes to kilograms:

- | | |
|-------------------------------------|-------------------------------------|
| a 5 t = <input type="text"/> kg | b 16 t = <input type="text"/> kg |
| c 56.25 t = <input type="text"/> kg | d 4.125 t = <input type="text"/> kg |
| e 0.5 t = <input type="text"/> kg | f 13.05 t = <input type="text"/> kg |

CONVERTING BETWEEN UNITS

1 Calculate how many grams there are in:

- | | | |
|---------------------------------|---------------------------------|---------------------------------|
| a 0.357 kg <input type="text"/> | b 0.624 kg <input type="text"/> | c 0.506 kg <input type="text"/> |
| d 0.975 kg <input type="text"/> | e 0.167 kg <input type="text"/> | f 0.719 kg <input type="text"/> |

2 Use decimal notation to write:

- | | | |
|-----------------------------------|-----------------------------------|-----------------------------------|
| a 1 kg 359 g <input type="text"/> | b 1 kg 725 g <input type="text"/> | c 3 kg 403 g <input type="text"/> |
| d 2 kg 635 g <input type="text"/> | e 5 kg 943 g <input type="text"/> | f 7 kg 875 g <input type="text"/> |

3 Calculate how many grams there are in:

- | | | |
|---------------------------------|---------------------------------|---------------------------------|
| a 2.124 kg <input type="text"/> | b 5.275 kg <input type="text"/> | c 3.506 kg <input type="text"/> |
| d 8.407 kg <input type="text"/> | e 1.327 kg <input type="text"/> | f 6.712 kg <input type="text"/> |
| g 4.851 kg <input type="text"/> | h 7.963 kg <input type="text"/> | i 9.615 kg <input type="text"/> |

CONVERTING BETWEEN UNITS

Convert the following metric tons (t) to kilograms (kg).

1) 56.25 t = _____ kg	2) 45.6 t = _____ kg
3) 31 t = _____ kg	4) 21.212 t = _____ kg
5) 78.2 t = _____ kg	6) 63.24 t = _____ kg
7) 91.3 t = _____ kg	8) 36.35 t = _____ kg

17

💡 CHALLENGE QUESTION 💡

How long would it take to use 1 tonne of laundry powder if a 1.5kg packet lasts for 5 weeks?



18

KWL

What I know	What I want to know	What I learned

VOCABULARY

Drag the definition to the correct vocabulary word.

atom	matter	element

Anything that has mass and volume

The basic unit of a chemical element

A single type of atom

ATOMS

QUESTIONS

Match the answer to the question about atoms.

What is an atom?	What do atoms make?
What makes up an atom?	How do we see atoms?

All matter

The basic unit of a chemical
element

Use nanotechnology; can't be seen
with the naked eye.

Has a nucleus in the center;
electron clouds surround nucleus;
protons and neutrons inside nucleus

WEB SEARCH

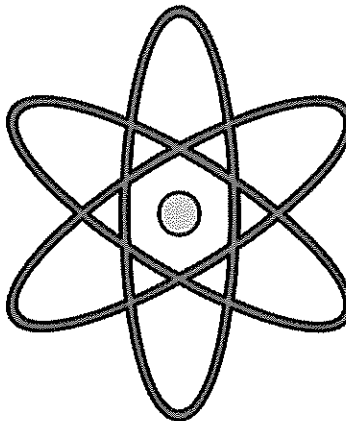
Use this website to answer the questions below.

Why are atoms important?

Where are protons and neutrons found?

What are the three basic parts of an atom? How are they different?

What does the atomic number tell us and where would we find this?



DRAG IT

Match the type of charge to the particle.

Particle	Charge
Neutron	
Proton	
Electron	

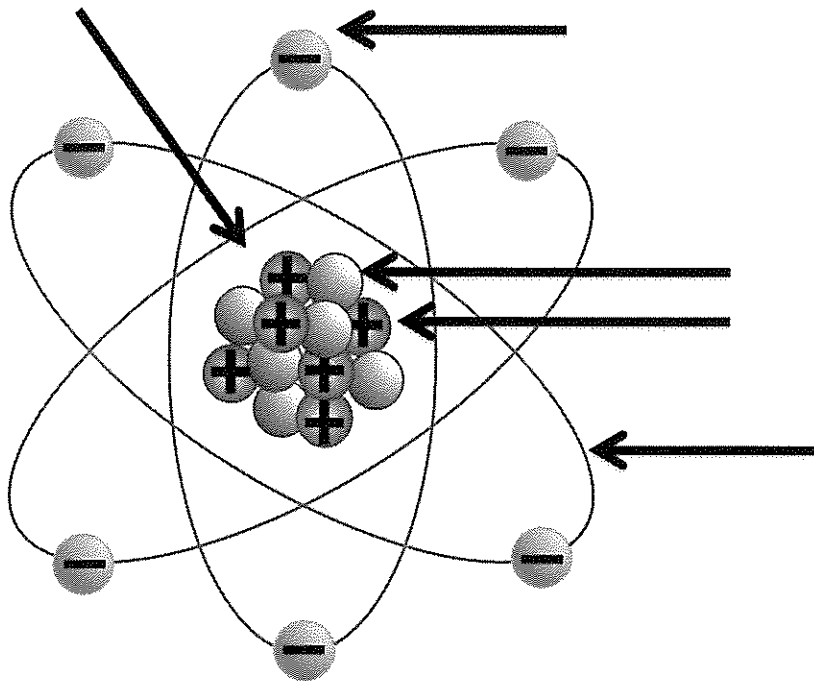
Positive

Negative

Neutral

LABEL THE ATOM

Drag the labels to the atom.



electron

neutron

proton

nucleus

orbit

ELEMENTS

DRAG IT

Drag the blue boxes to label the element.

We identify elements with the number of in the nucleus. Elements consist of a type of atom. Elements can have than one atom, but not more than one type of . All elements are located on the periodic .

table

more

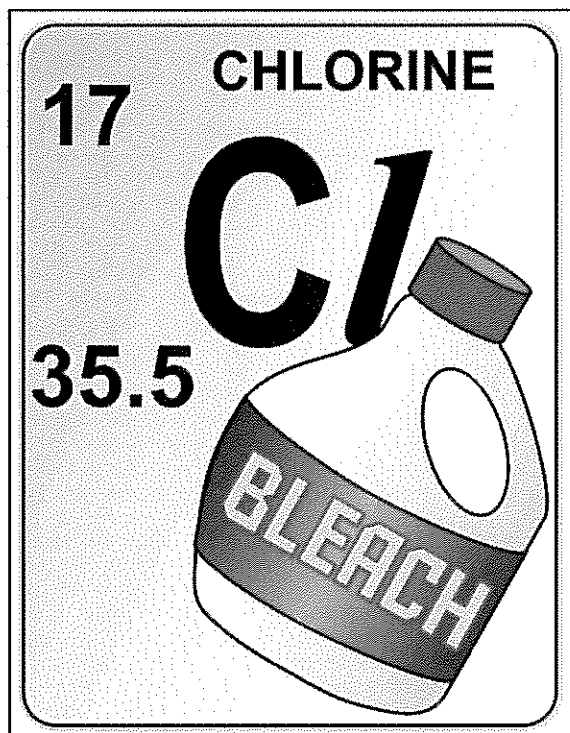
protons

single

atom

DRAG IT

Drag the blue boxes to label the element.



Chemical symbol

Atomic number

Element name

LABEL IT

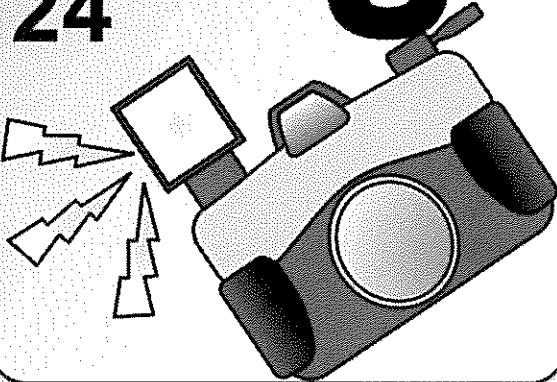
Type the label into the blue box.

12

MAGNESIUM

Mg

24



WEB SEARCH

Use this website to answer the questions below.

95% of our body is made up of what elements?

Most matter in the universe is made up of how many elements? What are some of these elements?

Which element is found both on Earth and Mars?

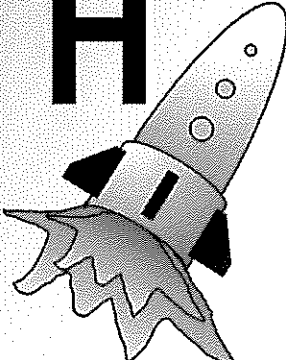
The elements in the fourth period, or row, of the periodic table are called what?

1

HYDROGEN

H

1



ELEMENT SEARCH

Use this website to answer the questions below.

Element name:

Atomic number:

Element symbol:

Where can you find it?

How many electrons:

insert picture of this
element's atom here using
Google Image Search on
the toolbar

Onomatopoeia

Onomatopoeia is a word that sounds like the thing it means.

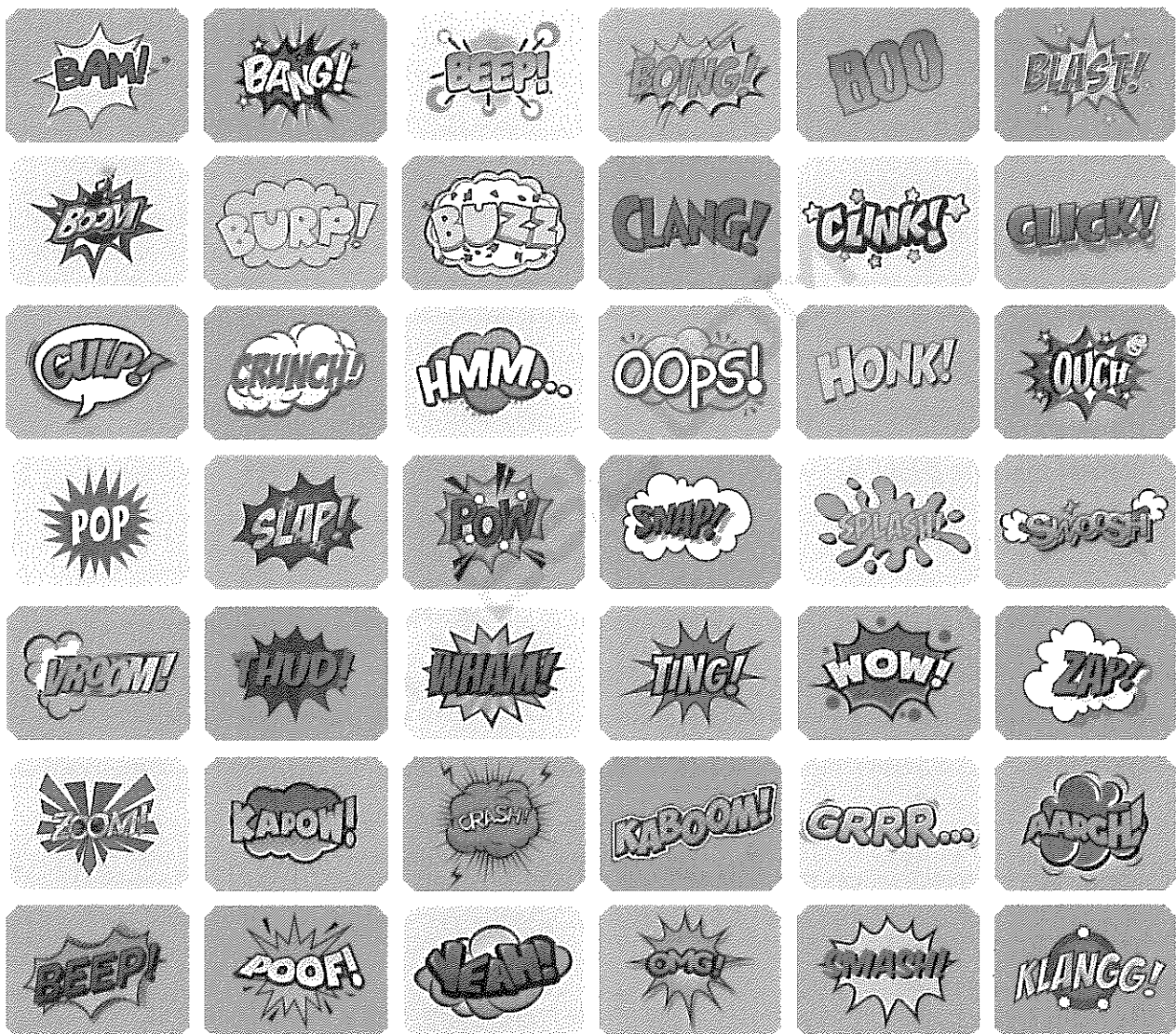
For example,

* buzz -- the sound a bee makes.

* zip -- the sound a zipper makes.

* crunch -- the sound leaves being stepped on make OR the sound of someone eating carrots

* Required



5. What sound does a clock make? *

.....

6. What sound do your teeth make when you are shivering? *

.....

7. What sound does a leaking tap make? *

.....

8. What sound does a twig breaking make? *

.....

9. What sound does a fire make? *

.....

Idiom

An idiom is a word or phrase which means something different from its literal meaning.

For example,

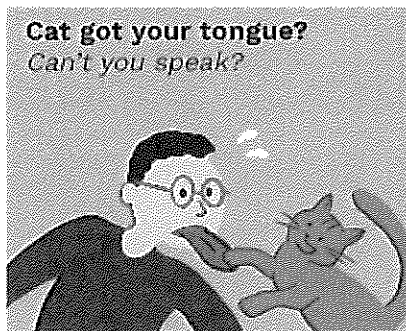
* Break a leg --> means good luck.

* Spill the beans --> to tell a secret

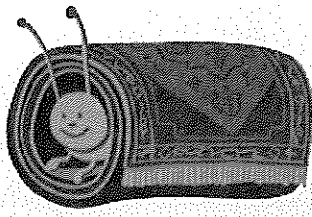
* It's raining cats and dogs --> it is raining heavily

* Required

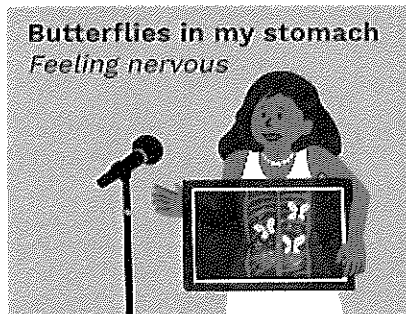
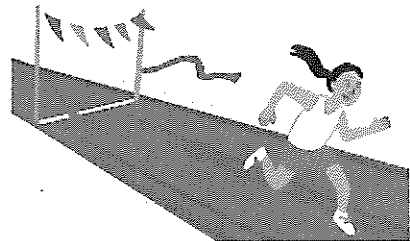
Choose the correct meaning for each idiom.



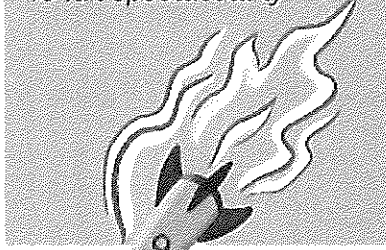
Snug as a bug in a rug
Warm and cozy



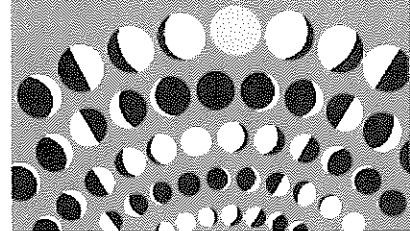
Go the extra mile
Make an extra effort



To go down in flames
To fail spectacularly



Once in a blue moon
Rarely



Below are some idioms. Choose the multiple choice answer which describes what that idiom means.

1. That's the last straw! *

1 point

Mark only one oval.

- ☐ Someone's patience has run out.
- ☐ Make a mistake.
- ☐ Make people feel more comfortable
- ☐ To joke around with someone

6. Going bananas means... *

1 point

.....

7. Rain on someone's parade means... *

1 point

.....

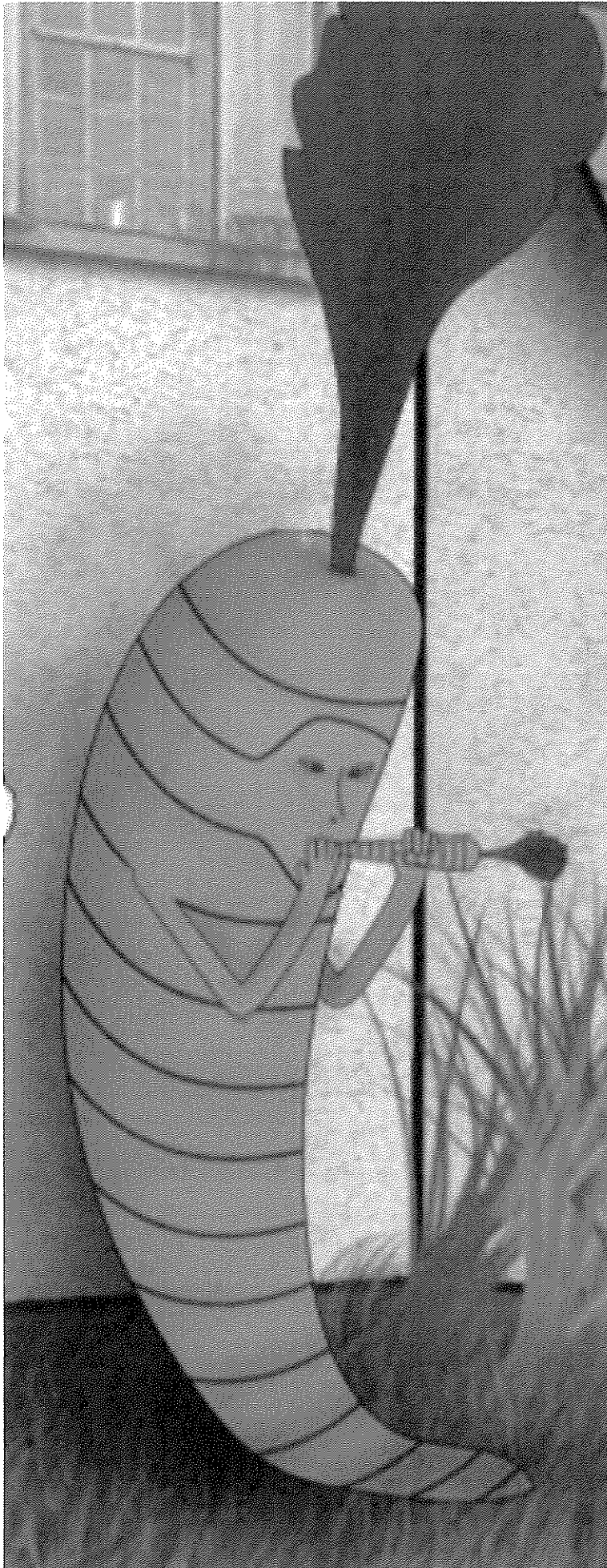
8. Bent out of shape... *

1 point

.....

11. What do you think this idiom means? *

1 point



13. What do you think this idiom means? *

1 point



.....

15. What other idioms can you find in the picture? *

0 points



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Google Forms

Thursday Check-In

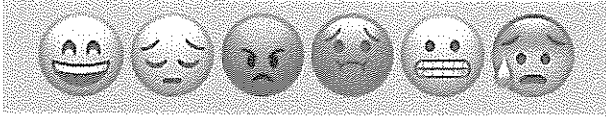
Good Morning! Happy Thursday!

*Required

1. Name *

.....

2. How are you feeling this morning? *



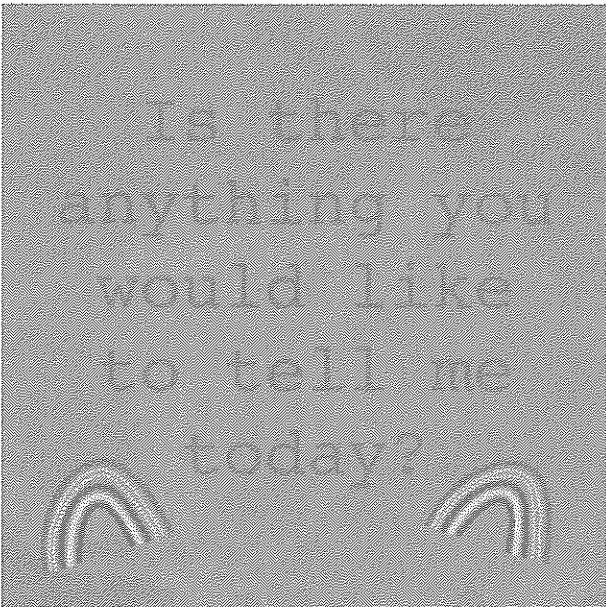
Mark only one oval.

- ☐ Happy
☐ Sad
☐ Angry
☐ Sick
☐ Anxious
☐ Afraid

3. Why are you feeling that way today? Is there anything your teacher can do to help? *

.....
.....
.....
.....

5.



.....
.....
.....

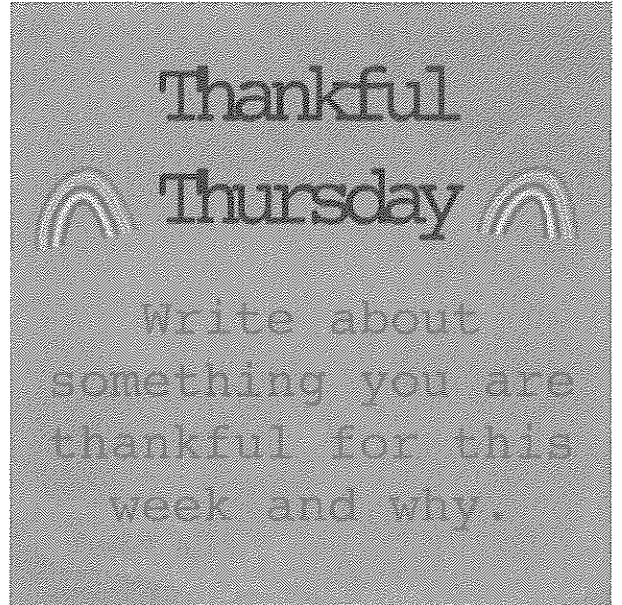
Let's have a fantastic day!!!

.....

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Google Forms

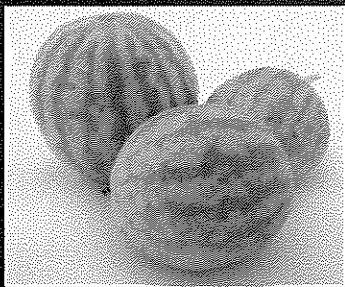
4. *



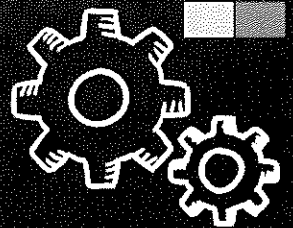
.....
.....
.....
.....

WEEK 5
HOME LEARNING
MATHEMATICS
MASS
LESSON 2

1



WARM UP 1
WATERMELONS



Here are three watermelons.
The one in the front of the picture weighs 7.35kg.
The one on the left of the picture weighs 8.20kg.
The one on the right of the picture weighs 6.45kg.



In a melon-growing competition, a melon is awarded a point for each gram that it weighs.

How many points does each melon gain? Which melon is the winner?
Can you explain how you worked this out?

2

WARM UP 2

ORANGES AND LEMONS

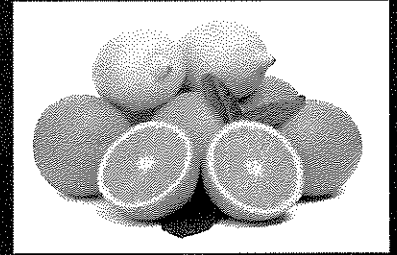


ON THE TABLE THERE IS A PILE OF ORANGES AND LEMONS THAT WEIGHS EXACTLY ONE KILOGRAM.

THE ORANGES ALL WEIGH 130 GRAMS.

THE LEMONS ARE ALSO ALL THE SAME WEIGHT, WHICH IS LESS THAN $\frac{2}{3}$ OF THE WEIGHT OF AN ORANGE.

THERE ARE TWICE AS MANY LEMONS AS ORANGES IN THE PILE.



HOW MANY LEMONS ARE THERE AND HOW MUCH DOES EACH ONE WEIGH?

3



LEARNING INTENTIONS AND SUCCESS CRITERIA

LEARNING INTENTION	interpret information about mass on commercial packaging and solve problems involving gross mass and net mass		solve problems involving different units of mass, eg find the total mass of three items weighing 50 g, 750 g and 25 kg	
SUCCESS CRITERIA	I can locate and interpret information about mass on commercial packaging.	I can locate and interpret information about mass on commercial packaging and solve problems.	I can solve problems involving different units of mass.	I can solve and pose problems involving different units of mass.

4



TO FIND THE NET MASS:

GROSS MASS – MASS OF THE PACKAGING = NET MASS.

TO FIND THE MASS OF THE PACKAGING:

GROSS MASS – NET MASS = PACKAGING.

Go to a supermarket's online catalogue and find 5 products for each column.
Record in a table.

Choose groups of items and calculate their total mass.

Products that have 'net' on the label	Products that do not have 'net' marked
Arnott's Scotch Finger Salted Caramel Tart 232g NET	Cheezels Pizza Minis – 125g

2 Solve these problems.

- a Tim wanted to weigh his dog. He first found his own weight: 48 kg. He then picked up his dog and stood on the scales. The scales showed 71 kg. How much does Tim's dog weigh?
- b A treasure chest weighed 15.5 kg but when the pirates emptied the treasure it weighed only 7.675 kg. What did the chest weigh?
- c The gross mass of a bucket of water is 9.15 kg. The empty bucket has a mass of 250 g. What is the mass of the water?
- d The content of a packet of peanuts has a mass of 375 grams. The packet has a mass of 3 g. What is the gross mass of the peanuts?

- 2** A regular packet of cereal has a mass of 540 g. An average serving is 45 g. Answer these questions without a calculator.

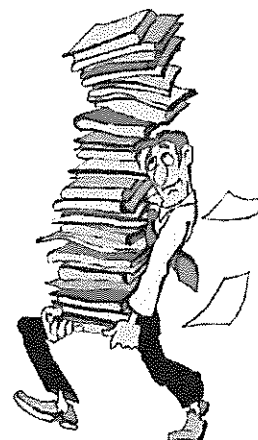
- a How many average servings are there in one packet? _____
- b There are four people in Michaela's family. Each has an average serve per day. How many days will the box last? _____
- c The largest sized box has a mass of 720 g. How long will this box last her family? _____
- d Michaela's family is going camping for two weeks. They need to take all their food with them. They want to take exactly the right amount of cereal. How many boxes of each size will they need to take? _____

- 3** There are 28 students in Mr Brown's class. Being the dedicated and hardworking teacher that he is, he lugs their books home to mark each week.

- a Each maths book has a mass of 550 g. He puts them all in a tote tray which has a mass of 345 g. What is the total mass he will carry to his car?

- b Last week he took home the spelling books in the same tote tray. The total mass was 9.445 kg. What was the mass of each spelling book?

- c Next week, the football starts again. There goes the marking. Mr Brown will now be sitting in the grandstand munching chips, cheering on the Mighty Blues. If he consumes four 375 g bags of chips in a particularly tense game, how much does he eat?



CONVERTING BETWEEN UNITS OF MEASUREMENT

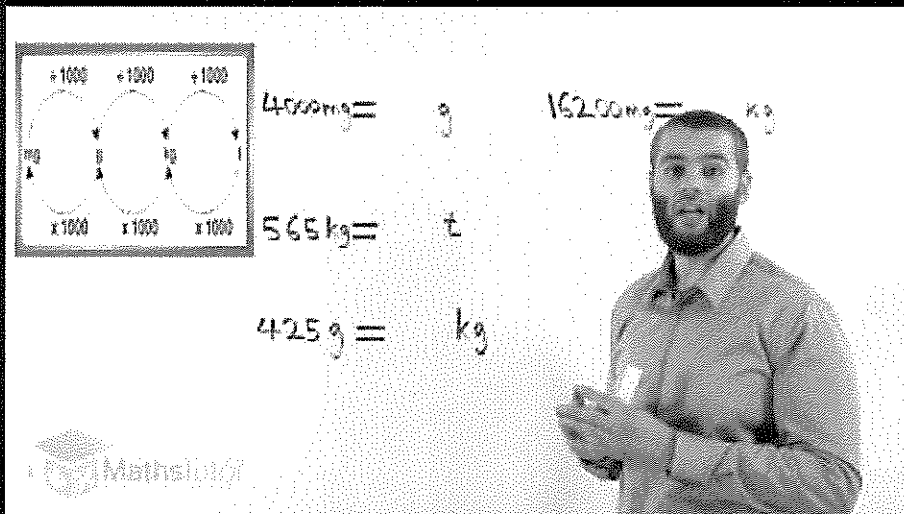


Diagram showing the relationship between metric mass units:

- mg to g: $\times 1000$ (upward arrow), $\div 1000$ (downward arrow)
- g to kg: $\times 1000$ (upward arrow), $\div 1000$ (downward arrow)
- kg to t: $\times 1000$ (upward arrow), $\div 1000$ (downward arrow)

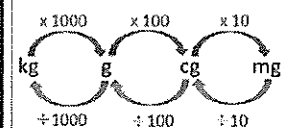
Conversion problems on the whiteboard:

- $45000 \text{ mg} = \text{g}$
- $16200 \text{ mg} = \text{kg}$
- $565 \text{ kg} = \text{t}$
- $425 \text{ g} = \text{kg}$

Maths101 logo

9

Converting Metric Mass



I HAD 2 KG OF SUGAR. I USED 500 G TO MAKE JAM, AND 350 G TO MAKE A CAKE. HOW MUCH SUGAR DO I HAVE LEFT?

10

A LIFT IN A SHOPPING MALL HAS A NOTICE THAT INDICATES THAT IT CAN CARRY 2.2 TONNES OR A MAXIMUM OF 20 PEOPLE. CONVERT THE TONNE MEASUREMENT TO KILOGRAMS AND WORK OUT WHAT THE ENGINEER WHO BUILT THE LIFT ESTIMATED THE MAXIMUM WEIGHT OF A PERSON TO BE.



For
solution...
Lift me



11

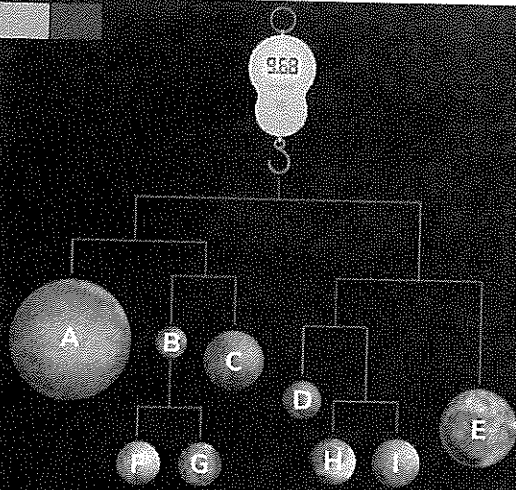
A LONG DISTANCE BUS SEATS 50 PASSENGERS AND ALLOWS EVERY PASSENGER TO EACH HAVE LUGGAGE OF UP TO 30 KG

IF 50 PEOPLE, WITH AVERAGE WEIGHT OF 80 KG PER PERSON, AND ONE PIECE OF LUGGAGE EACH THAT WEIGHS AN AVERAGE OF 29 KG, WHAT WOULD BE THE TOTAL LOAD BEING CARRIED BY THE BUS IN TONNES?



Answer
under the
bus

12



THIS PLANET MOBILE IS PERFECTLY
BALANCED.

THE HANGING SCALES READS A GROSS
MASS OF 9.68 KG.

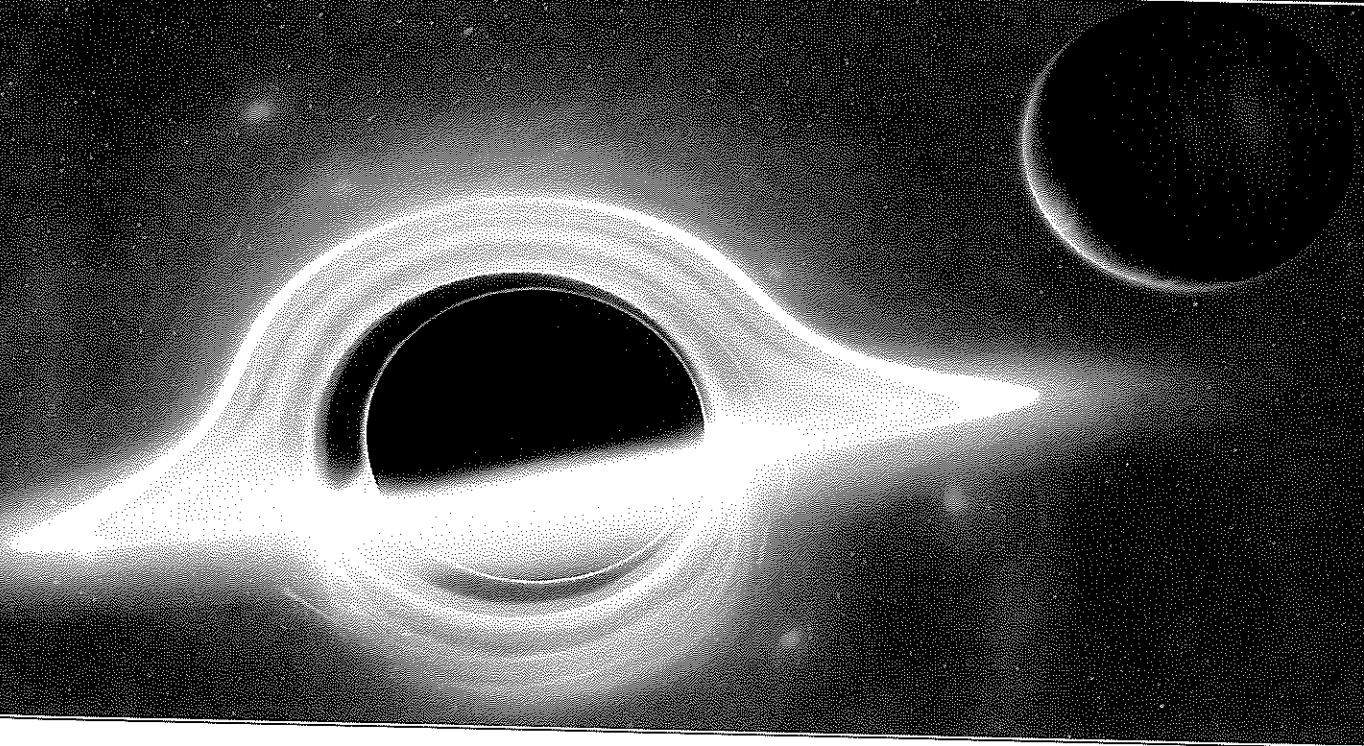
WHAT IS THE MASS OF EACH PLANET IN
THIS MOBILE IF:

PLANET B = 0.508kg

PLANET I = 0.605kg ?

THE MASS OF THE HANGERS IS
NEGLECTIBLE

THE SOLUTION IS UNDER HERE ↓



CONVERTING & PROBLEM SOLVING

12 Convert these mass units to another as indicated.

- | | | |
|--------------------|------------------------------|---------------------|
| a 5 t = _____ kg | e 2.5 kg = _____ g | i 3 g = _____ mg |
| b 2.5 t = _____ kg | f 1.5 kg = _____ g | j 2000 mg = _____ g |
| c 2 kg = _____ g | g $\frac{1}{2}$ kg = _____ g | k 3500 g = _____ kg |
| d 6 kg = _____ g | h 1 g = _____ mg | l 2250 kg = _____ t |

13 Solve the problems.

- | | | |
|---|---|--|
| a | A jar of jelly beans has a mass of 1 kg. If the jar's mass is 210 g what is the mass of the jelly beans? | |
| b | How many 65 kg sacks of potatoes can be made up from a load with a mass of 1.040 tonnes? | |
| c | If 20 apples have a combined mass of 4 kg, what is the average mass of each apple? | |
| d | The maximum load permitted on a truck is 5 tonnes. What would be the mass of 35 containers each of 145 kg? Would this load be permitted on the truck? | |



Mass word problems (metric units)

Grade 5 Word Problems Worksheets

Read and answer each question:

- An elevator can carry up to 12 persons with a maximum weight of 1,800 kg. What does the manufacturer of the elevator assume each person that takes the elevator weighs?
- A pack of dog food that weighs 5 kg cost \$20. A smaller pack of dog food that is 500 g costs \$2.50. Which one has better value?
- How many 30-g flower pots can a 3-kg pack of soil fill up?
- There are two boxes of cereal in the kitchen. One contains 450 g of cereal and the other one contains 1.67 kg of cereal. How much cereal (measured in kg) are there in total?
- The weight of a puppy is 1.6 kg and the weight of a kitten is 750 g. What is the difference in their weights (measured in g)?
- The average weight of a car is 1,425 kg. A car carrier can take up to 9 cars. The car carrier takes about _____ kg if it is fully loaded up.
 - 11,000
 - 12,000
 - 13,000



ANSWERS
ON THE
NEXT SLIDE

Answers

1. $1800 \div 12 = 150$
The manufacturer of the elevator assumes each person weighs 150 kg.
2. $20 \div 5 = 4$
The bigger pack costs \$4 per kg.
 $2.5 \times 2 = 5$
The smaller pack costs \$5 per kg.
The 5-kg pack is better value.
3. $6 \text{ kg} = 6000 \text{ g}$
 $6000 \div 30 = 200$
A 6-kg pack of soil can fill up 200 flower pots.
4. $450 \text{ g} = 0.45 \text{ kg}$
 $1.67 + 0.45 = 2.12$
There are 2.12 kg of cereal in total.
5. $1.6 \text{ kg} = 1,600 \text{ g}$
 $1,600 - 750 = 850$
The difference in their weights is 850 g.
6. c

Friday Check-In

Good Morning! Happy Friday!

*Required

1. Name *

.....

2. How are you feeling this morning? *



Mark only one oval.

- ☐ Happy
- ☐ Sad
- ☐ Angry
- ☐ Sick
- ☐ Anxious
- ☐ Afraid

3. Why are you feeling that way today? Is there anything your teacher can do to help? *

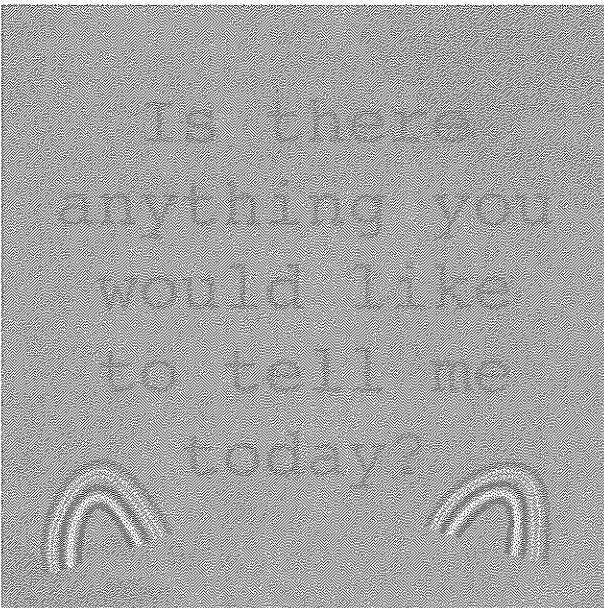
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5.



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.....

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Let's have a fantastic day!!!

.....

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Google Forms



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Level 1 Question

Focus Number and place value
• Operations



Number and Algebra

OCTOPUS AND STARFISH

In a tank in the City Aquarium, there are a number of octopuses and starfish.

a) Stella sees 12 creatures in a tank and counts 72 legs altogether. How many octopuses are there? How many starfish are there?

b) In the next tank, Stella counts 147 legs and sees twice as many octopuses as starfish. How many octopuses are there? How many starfish are there?

Extension

In another tank, there are squid (which have 10 legs), octopuses and starfish. There is an equal number of each creature. There are 161 legs altogether.

a) How many creatures are there altogether?

b) The next week, 5 octopuses are moved out and 9 new starfish are moved into the tank. How many legs are there altogether?


Strategy hints!

- ★ Look for the important words in the question.
- ★ Look for a pattern.
- ★ Have a go.

Working Out/ Answer

Level 2 Question

Focus Number and place value
• Numeration



Number and Algebra

WHAT NUMBER AM I?

I am a 3-digit prime number. All of my digits are different. My digits add up to 17.

My 100s digit is a prime number.

My 10s and 1s digits are both multiples of 3.

What is the biggest number I could be?

Extension

a) I am a 3-digit prime number. My digits odd up to 17. All of my digits are prime numbers. What is the biggest number I could be?

b) I am a 3-digit prime number. Two of my digits are different perfect squares and one of my digits is a prime number. What is the biggest number I could be?

Strategy hints!

- ★ Look for the important words in the question.
- ★ Think logically.

Working Out/ Answer