Monday 27th April

Dear Year 6

We hope you and your families are keeping well and have had a good week.

Here are the suggested activities for this week for you to follow and complete.

Please also remember to take time to relax, exercise and be kind to yourselves.

Take care and keep smiling,

Mrs Graham and Mrs North

Reading

As always, you should be aiming to read for **at least 20 minutes everyday**. Find some time today to sit quietly and read.

Remember you can now take Accelerated Reader quizzes from home by using this link Howley Grange Renaissance at home and logging on as usual using your username and password.

To check that the book you are reading has a quiz, you can check it using on Accelerated Reader Bookfinder. It's okay to read books which haven't got a quiz – just keep a record of what you have read.

Keep reading and exploring new worlds and adventures!

TalkforWriting

Doors
-the world of possibility
Year 6 Workbook
by Jamie Thomas

Introduction

Have you ever looked at a door and wondered what might be on the other side? Where may it lead? What may be hiding within? At first glance, a door is just a piece of wood, glass or metal that is opened and closed so that people can get in and out of a room, a vehicle or a space. But in the hands of a writer, a door represents a world of possibility, a world where things are not only hidden but often closed off and restricted. Together, through poetry, text games and narrative, we shall explore the potential that a door offers to you, the writer.

Read this extract from *The Snow-Walker's Son* by Catherine Fisher. You can listen to the extract here: https://soundcloud.com/talkforwriting/doors

The door was the last one in the corridor.

As the flames flickered over it, they showed it was barred; a hefty iron chain hung across it, and the mud floor beneath was red with rust that had flaked off in the long years of locking and unlocking.

The keeper hung his lantern on a nail, took the key from a dirty string around his neck, and fitted it into the keyhole. Then he looked behind him.

'Get on with it!' the big man growled. 'Let me see what she keeps in there!'

The keeper grinned; he knew fear when he heard it. With both hands he turned the key, then tugged out the red chain in a shower of rust and pushed the door. It opened, just a fraction. Darkness and a damp smell oozed through the black slit.

He stepped well back, handed the stranger the lantern, and jerked his head. He had no tongue to speak with; she'd made sure he kept her secrets.

The stranger hesitated; a draught moved his hair and he gazed back up the stone passageway as if he longed suddenly for warmth and light. And from what I've heard, the keeper thought, you won't be seeing much of those ever again.

Then the man held up the lantern and pushed the door. The keeper watched his face intently in the red glow, and his great hand, as it clutched a luck-stone that swung at his neck. The man went in, slowly. The door closed.

© Catherine Fisher 2011 from The Snow Walker's Son, published by Red Fox, by permission of the author.

English Activity 1

Now answer the following questions in as much detail as possible. Remember to use evidence from the text to support your answers where possible.

1. ***The door was the last one in the corridor.***
   What is the significance of the word *last*? Can you think of another context where the word *last* has a significant meaning? e.g. *the last chance.*

2. How do the opening lines (highlighted above) set the mood of the story? What are your immediate impressions?

3. Having spent a great deal of time reflecting on the significance of doors and their appearance, what does this description suggest to you?

4. Why has Fisher described the iron chain as being 'hefty'? What could the significance of this word be in the context of the story?

5. ***Darkness and a damp smell oozed through the black slit.***
   How does this make you feel as a reader? What is the relevance of both darkness and a damp smell? Do either of these surprise you; if so, why?

Maths Activity 1a – ten in ten ☺

1) 76.05 x 1000 =
2) ½ x 630 =
3) 0.25 x 480 =
4) 16 - 9.343 =
5) 4 x 9 x 10 =
6) 385 x 37 =
7) 2/7 + 4/5 =
8) 58083 - 9976 =
9)   + 864 = 1695
10) 4362 +   = 9846

You know the rule!

Ten minutes to answer ten questions ☺

Maths Activity 1b - Multiplying and Dividing Decimals

We have included Learning Reminders that will help you with answering today's questions.

Don't forget that you can also use your Maths revision book to help you.

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Maths Activity 1b - Multiplying and Dividing Decimals

Mental decimal multiplication and division

**

5 × 6	5 × 0.6	5 × 0.06
4 × 7	4 × 0.7	4 × 0.07
8 × 9	8 × 0.9	8 × 0.09
15 ÷ 3	1.5 ÷ 3	0.15 ÷ 3
45 ÷ 5	4.5 ÷ 5	0.45 ÷ 5
48 ÷ 8	4.8 ÷ 8	0.48 ÷ 8

Challenge

Find the missing numbers:

◻ x 0.8 = 5.6   3.2 x ◻ = 0.4   ◻ ÷ 9 = 0.07

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Maths Activity 1b - Multiplying and Dividing Decimals

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Mental decimal multiplication

Use partitioning to work out the answers to these multiplications.

1. 3×2.4

    $= (3 \times 2) + (3 \times 0.4)$

    $= \qquad +$

    $=$

2. 6×2.4

3. 5×4.3

4. 7×4.3

5. 4×7.2

6. 8×10.7

7. 9×8.6

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8. 6×5.8

Maths Activity 1b - Multiplying and Dividing Decimals

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Mental decimal multiplication and division

5 × 0.6	5 × 0.06
4 × 0.7	4 × 0.07
8 × 0.9	8 × 0.09
1.5 ÷ 3	0.15 ÷ 3
4.5 ÷ 5	0.45 ÷ 5
4.8 ÷ 8	0.48 ÷ 8

Challenge

Write your own multiplications with an answer of 3.6.
Write your own divisions with an answer of 0.06.

Maths Activity 1b - Multiplying and Dividing Decimals

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Mental decimal multiplication

Use partitioning to work out the answers to these multiplications.

1. 5×4.3
2. 5×0.43
3. 4×7.2
4. 4×0.72
5. 8×6.7

6. 7×8.4
7. 3×0.26
8. 3×0.72
9. 6×0.64
10. 4×0.58

Challenge

Write three multiplications of the form ☐ x ☐ . ☐ with an answer between 35 and 45.

You can only use each digit 1 to 9 once!

Activity 1c - Challenge

Check your understanding
Questions

Write the first six facts in the 0.5 times table…

1 x 0.5 = 0.5

2 x 0.5 =

What is 4.5 divided by 0.5?

A metal tag is 0.7cm long.

How many tags can be cut from a strip of metal 6.3cm long.

How many tags could be cut from a strip of metal 70cm long

Use partitioning to find 28 x 6. Now explain how to multiply

2.8 by 6.

Finally, write the answer to 0.28 x 6 without doing any further multiplication!

Science - Light

The following activities are to be done over the week.

We have added a Knowledge Postcard at the beginning which will help you with everything you need to know for these activities and explain any key vocabulary.

Key Vocabulary

light	A form of energy that travels in a wave from a source.
light source	An object that makes its own light.
reflection	Reflection is when light bounces off a surface, changing the direction of a ray of light.
incident ray	A ray of light that hits a surface.
reflected ray	A ray of light that has bounced back after hitting a surface.
the law of reflection	The law states that the angle of the incident ray is equal to the angle of the reflected ray.

Key Knowledge

We need light to be able to see things. Light waves travel out from sources of light in straight lines. These lines are often called rays or beams of light.

Light from the sun travels in a straight line and hits the chair. The light ray is then reflected off the chair and travels in a straight line to the girl's eye, enabling her to see the chair.

The law of reflection states that the angle of incidence is equal to the angle of reflection. Whenever light is reflected from a surface, it obeys this law.

The angle of reflection is the angle between the normal line and the reflected ray light.

The angle of incidence is the angle between the normal line and the incident ray of light.

angle of reflection
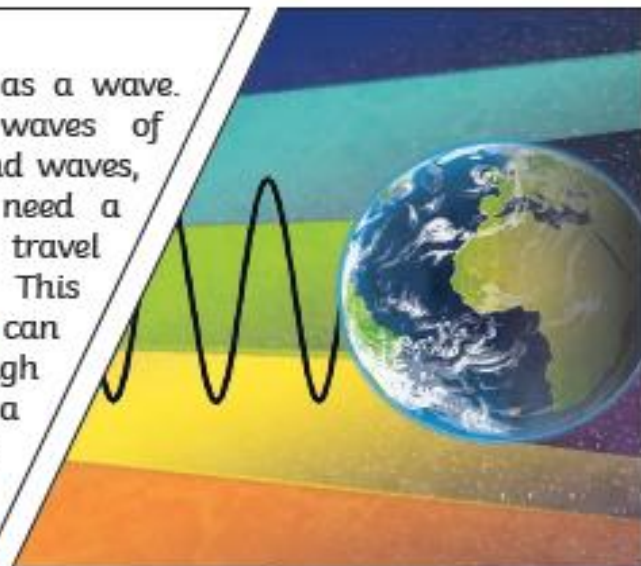
reflected ray

normal line

incident ray

angle of incidence

Light travels as a wave. But unlike waves of water or sound waves, it does not need a medium to travel through. This means light can travel through a vacuum - a completely airless space.
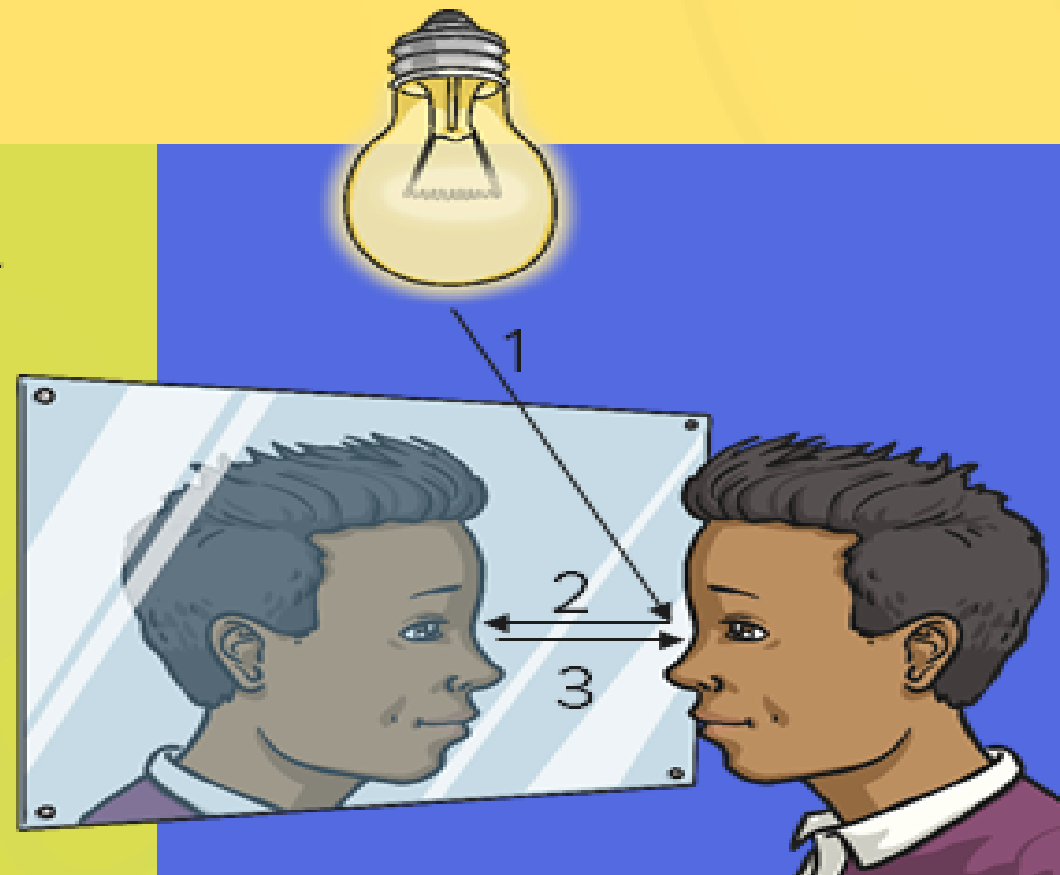
Seeing Reflections

The law of reflection is what allows us to see an object reflected in a mirror.

Look at the way light travels to enable the boy to see his face reflected in the mirror:

1. Light from the bulb hits the boy's face and bounces off.

2. The light reflected from the boy's face hits the mirror.

3. The light reflected from the mirror travels to the boy's eyes, so he can see the image of his face reflected in the mirror.
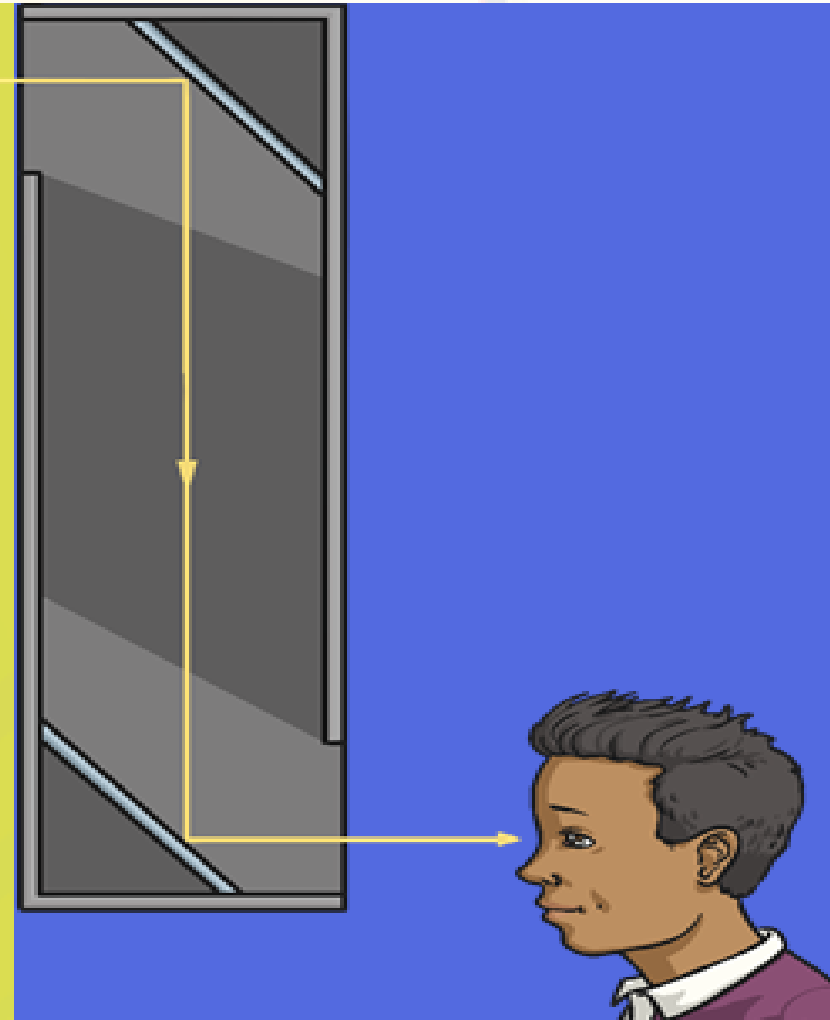
Make a Periscope

You are going to use your understanding of reflection and the angles of incidence and reflection to make a periscope.

A periscope is a device for seeing over or around something.
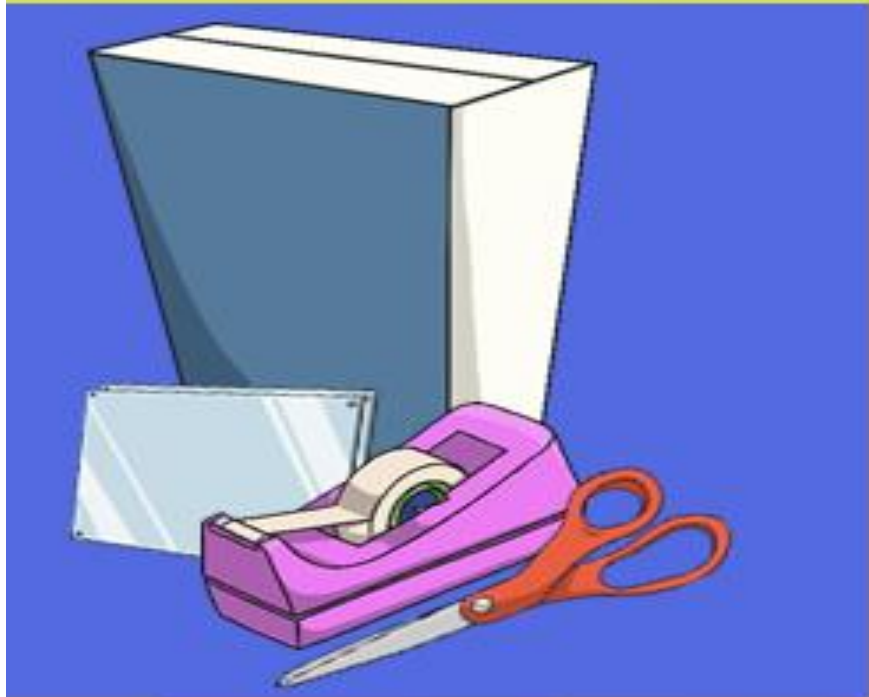
Periscopes were first used by sailors in around 1860, who used them in submarines to see above the surface of the water. They were also used by soldiers in the First World War, to see over the top of their trenches. They are still used today by tanks and some submarines.

A simple periscope is a tube with a mirror at either end. The mirrors need to be positioned so that the light is reflected from the mirror at one end, down the tube to the other mirror, then out of the tube to the observer's eyes.

Science activity 1 – make a periscope

Use a cereal box, scissors, 2 mirrors and sticky tape to make your periscope.

You might use the template or you may try to construct your own!

Use the instructions on the Making a Periscope Activity Sheet to help you.

Instructions

You will need:

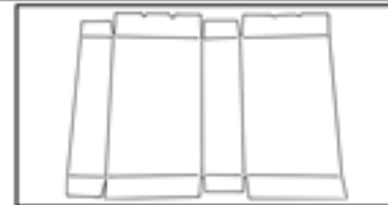A cereal box | A pair of scissors | 2 safety mirrors | Sticky tape

Step 1

Carefully open up your cereal box and lay it out flat.

Step 2

Stick the 'mirror' templates in the centre of the wide panels of the cereal box.
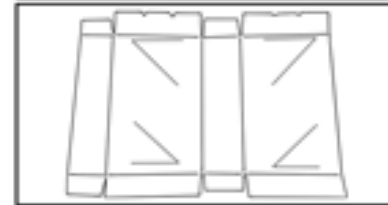
Step 3

Stick the 'window' templates in the centre of the narrow panels of the cereal box.

Step 4

Carefully cut along the lines for the mirrors, and cut out the windows.
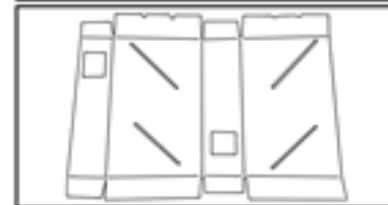
Step 5

Use sticky tape to stick the cereal box back together.
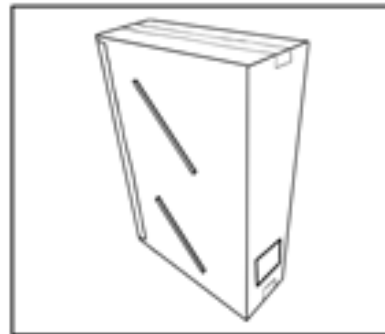
Step 6

Push the mirrors through the mirror lines you cut, and out the other side of the box so they are held firmly in place.
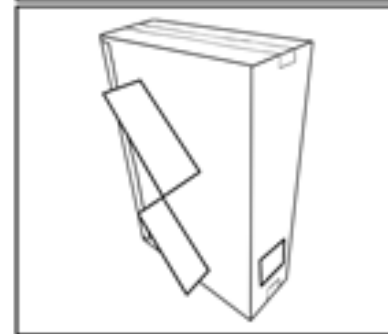
You should now be able to use your periscope to look around or over things! Look through one viewing window to see an image from the other window.

Science activity 2 – make a periscope

How Does it Work?

The mirrors in the periscope reflect light to enable you to see an image of an object around a corner or over the top of another object. Explain how they do this by completing the sentences below.

Light from a light source _____

_____.

The light travels through the top window and _____

_____

_____

_____.

I can see an image of the object!

Answers – 27/4/20

1. **The door was the last one in the corridor.**

   What is the significance of the word *last*? Can you think of another context

   where the word *last* has a significant meaning? e.g. *the last chance*.

It was the only one remaining; it was at the very end. That there were other doors in the corridor. Perhaps all of the other doors had been tried unsuccessfully. It was in this location for a reason. Last words – last breathe

2. How do the opening lines (highlighted above) set the mood of the story?

   What are your immediate impressions?

They describe a corridor – with no electricity – possibly not inside a building. Feelings of suspense and wonder at what is behind the door. Why is the door locked so securely? Questions as to whether the door is guarding something precious or something possessing great strength.

3. Having spent a great deal of time reflecting on the significance of doors

   and their appearance, what does this description suggest to you?

A variety of answers depending on interpretation

4. Why has Fisher described the iron chain as being 'hefty'? What could the

   significance of this word be in the context of the story?

Hefty means large and heavy. The chain was large and heavy to either keep people from opening the door easily to protect what it was guarding or to keep what was behind the door (which must have great strength) from escaping.

5. **Darkness and a damp smell oozed through the black slit.**

   How does this make you feel as a reader? What is the relevance of both

   darkness and a damp smell? Do either of these surprise you; if so, why?

Feelings of trepidation and worry – use of the word oozed suggests it moved slowly. Whatever is behind the door is not a good thing. Darkness can suggest evil/badness. Damp suggests moisture or water. Suggests something is underground without light. The writer is using the senses to describe the scene.

Maths Activity 1a – ten in ten ☺

1) 76050
2) 315
3) 120
4) 6.657
5) 360
6) 14245
7) 38/35 or 1 3/35
8) 48107
9) 831
10) 5484

Maths Activity 1b **

5 × 6 = 30	5 × 0.6 = 3	5 × 0.06 = 0.3
4 × 7 = 28	4 × 0.7 = 2.8	4 × 0.07 = 0.28
8 × 9 = 72	8 × 0.9 = 7.2	8 × 0.09 = 0.72
15 ÷ 3 = 5	1.5 ÷ 3 = 0.5	0.15 ÷ 3 = 0.05
45 ÷ 5 = 9	4.5 ÷ 5 = 0.9	0.45 ÷ 5 = 0.09
48 ÷ 8 = 6	4.8 ÷ 8 = 0.6	0.48 ÷ 8 = 0.06

Challenge

Find the missing numbers:

$7 \times 0.8 = 5.6$ $3.2 \times 0.125 = 0.4$ $0.63 \div 9 = 0.07$

Mental decimal multiplication (mild)

1.
$$3 \times 2.4$$
$$= (3 \times 2) + (3 \times 0.4)$$
$$= \quad 6 \quad + \quad 1.2$$
$$= 7.2$$

2.
$$6 \times 2.4$$
$$= (6 \times 2) + (6 \times 0.4)$$
$$= \quad 12 \quad + \quad 2.4$$
$$= 14.4$$

3.
$$5 \times 4.3$$
$$= (5 \times 4) + (5 \times 0.3)$$
$$= \quad 20 \quad + \quad 1.5$$
$$= 21.5$$

4.
$$7 \times 4.3$$
$$= (7 \times 4) + (7 \times 0.3)$$
$$= \quad 28 \quad + \quad 2.1$$
$$= 30.1$$

5.
$$4 \times 7.2$$
$$= (4 \times 7) + (4 \times 0.2)$$
$$= \quad 28 \quad + \quad 0.8$$
$$= 28.8$$

6.
$$8 \times 10.7$$
$$= (8 \times 10) + (8 \times 0.7)$$
$$= \quad 80 \quad + \quad 5.6$$
$$= 85.6$$

Mental decimal multiplication (mild) continued

7.
$$9 \times 8.6$$
$$= (9 \times 8) + (9 \times 0.6)$$
$$= \quad 72 \quad + \quad 5.4$$
$$= 77.4$$

8.
$$6 \times 4.8$$
$$= (6 \times 4) + (6 \times 0.8)$$
$$= \quad 24 \quad + \quad 4.8$$
$$= 28.8$$

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Maths Activity 1b ***

Mental decimal multiplication and division (hot)

$5 \times 0.6 = 3$	$5 \times 0.06 = 0.3$
$4 \times 0.7 = 2.8$	$4 \times 0.07 = 0.28$
$8 \times 0.9 = 7.2$	$8 \times 0.09 = 0.72$
$1.5 \div 3 = 0.5$	$0.15 \div 3 = 0.05$
$4.5 \div 5 = 0.9$	$0.45 \div 5 = 0.09$
$4.8 \div 8 = 0.6$	$0.48 \div 8 = 0.06$

Challenge

Answers could include: $1.2 \times 3 = 3.6$, $1.8 \times 2 = 3.6$ or $6 \times 0.6 = 3.6$,
and
$3.6 \div 6 = 0.6$, $1.8 \div 0.3 = 0.6$ or $1.2 \div 2 = 0.6$

Mental decimal multiplication (hot)

1. 5×4.3
    $= (5 \times 4) + (5 \times 0.3)$
    $= \quad 20 \quad + \quad 1.5$
    $= 21.5$

2. 5×0.43
    $= (5 \times 0.4) + (5 \times 0.03)$
    $= \quad 2 \quad + \quad 0.15$
    $= 2.15$

3. 4×7.2
    $= (4 \times 7) + (4 \times 0.2)$
    $= \quad 28 \quad + \quad 0.8$

Mental decimal multiplication (hot) continued

4. 4×0.72
    $= (4 \times 0.7) + (4 \times 0.02)$
    $= \quad 2.8 \quad + \quad 0.08$
    $= 2.88$

5. 8×6.7
    $= (8 \times 6) + (8 \times 0.7)$
    $= \quad 48 \quad + \quad 5.6$
    $= 53.6$

6. 7×8.4
    $= (7 \times 8) + (7 \times 0.4)$
    $= \quad 56 \quad + \quad 2.8$
    $= 58.8$

7. 3×0.26
    $= (3 \times 0.2) + (3 \times 0.06)$
    $= \quad 0.6 \quad + \quad 0.18$
    $= 0.78$

8. 3×0.72
    $= (3 \times 0.7) + (3 \times 0.02)$
    $= \quad 2.1 \quad + \quad 0.06$
    $= 2.16$

9. 6×0.64
    $= (6 \times 0.6) + (6 \times 0.04)$
    $= \quad 3.6 \quad + \quad 0.24$
    $= 3.84$

10. 4×0.58
    $= (4 \times 0.5) + (4 \times 0.08)$
    $= \quad 2 \quad + \quad 0.32$
    $= 2.32$

Challenge

Using digits 1 to 9 once only to give answers between 35 and 45 could include:
$8 \times 5.2 = 41.6$ $9 \times 4.1 = 36.9$ $7 \times 6.3 = 44.1$ or
$8 \times 5.3 = 42.4$ $4 \times 9.1 = 36.4$ $7 \times 6.2 = 43.4$

Maths Activity 1c - Challenge

Check your understanding

Answers

Write the first six facts in the 0.5 times table...

$1 \times 0.5 = 0.5$

$2 \times 0.5 = 1$

$3 \times 0.5 = 1.5$

$4 \times 0.5 = 2$

$5 \times 0.5 = 2.5$

$6 \times 0.5 = 3$

What is 4.5 divided by 0.5?   9   Complete the 0.5 table (above) to find that $9 \times 0.5 = 4.5$. Answers of 0.45 or 45 show confusion over place value related times table facts.

A metal tag is 0.7cm long.

How many tags can be cut from a strip of metal 6.3cm long?   9 since $0.7 \times 9 = 6.3$

How many tags could be cut from a strip of metal 70cm long?   100 since $0.7 \times 100 = 70$

Use partitioning to find 28 x 6. Now explain how to multiply 2.8 by 6.

$28 \times 6 = (20 \times 6) + (8 \times 6) = 120 + 48 = 168$.

2.8 x 6 is 10 times smaller, i.e. 16.8

Finally, write the answer to 0.28 x 6 without doing any further multiplication! 0.28 x 6 is 10 times smaller than 2.8 x 6, i.e. 1.68