

Coundon Primary School

Year 3

Maths Home Learning Pack

Week Commencing 22.06.20

*Although we have uploaded the relevant worksheets, there is no need to print them. our child can work directly from the screen.

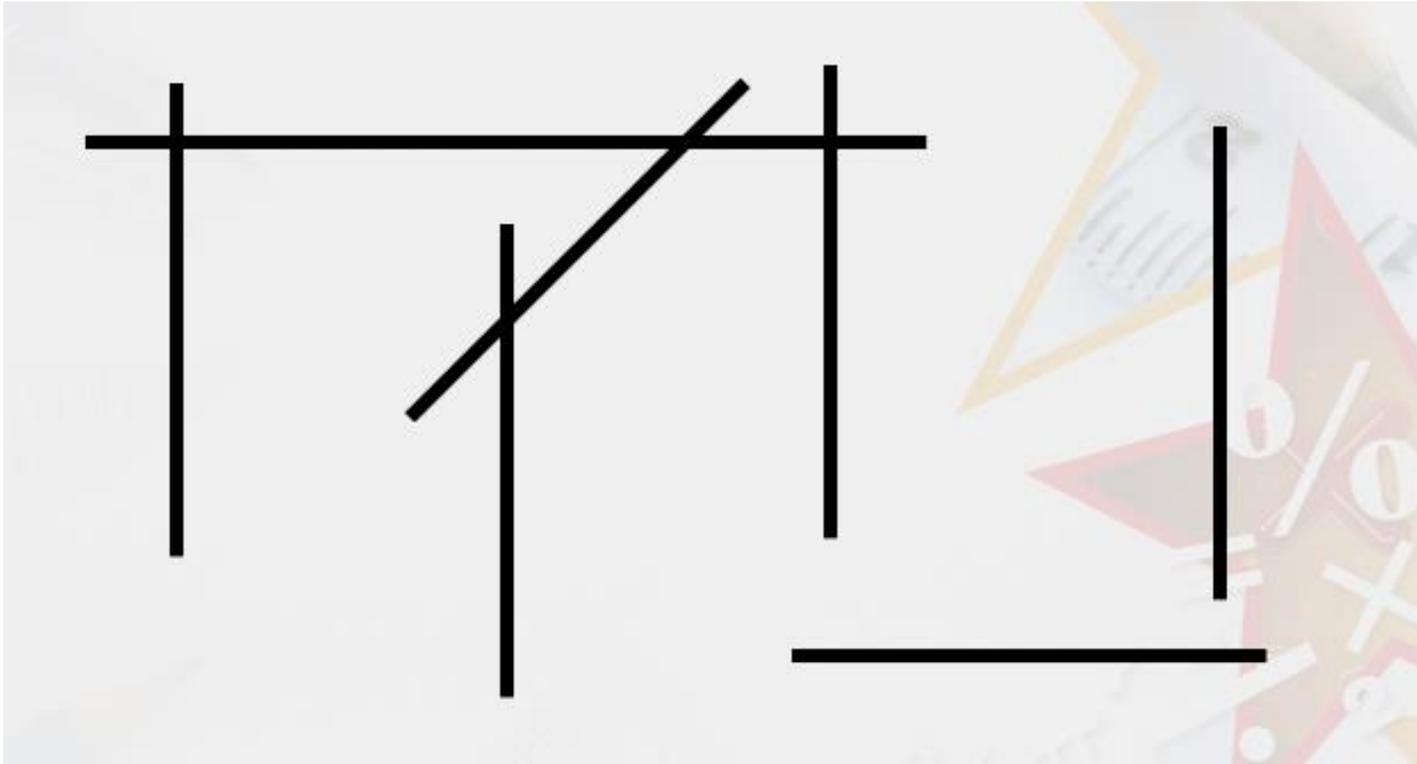
Lesson 1

Key Skills:

I can identify parallel and perpendicular lines.

Warm-up

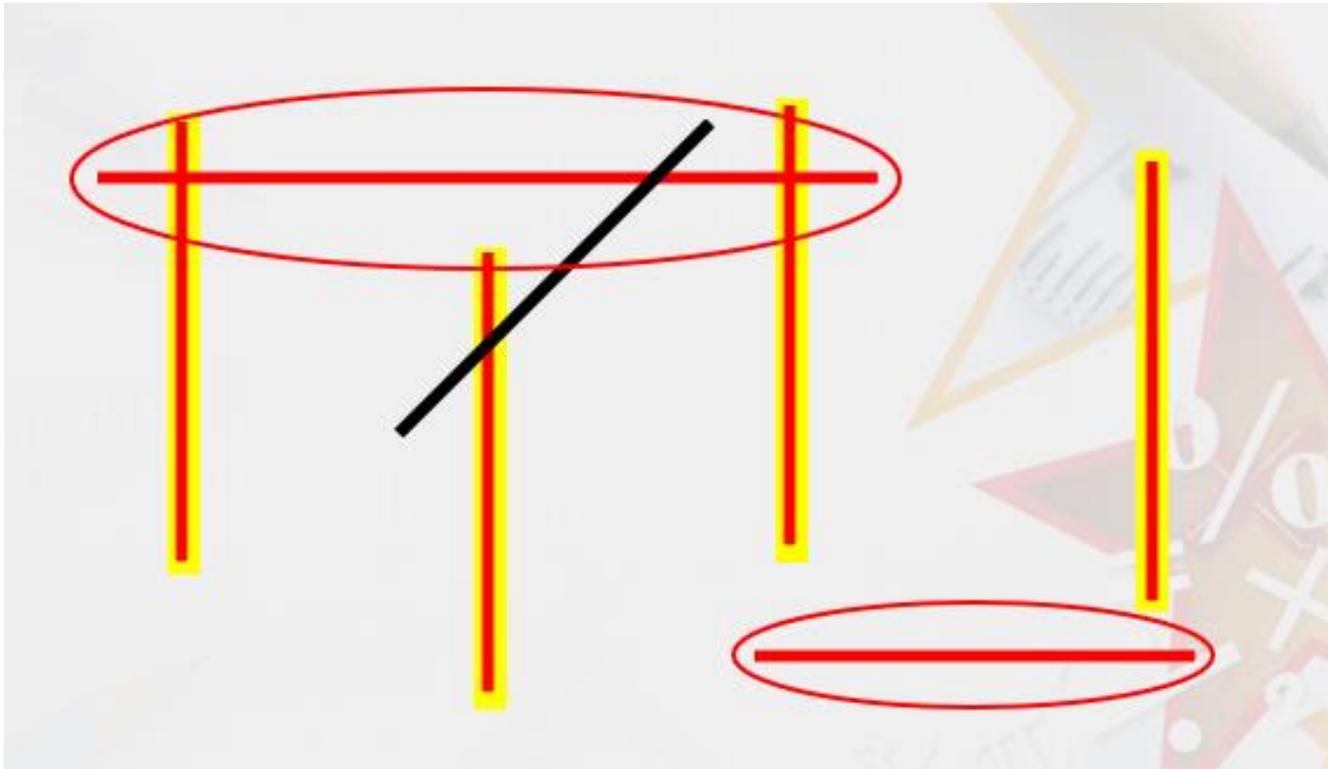
Can you identify the horizontal and vertical lines?



Warm-up

Answers

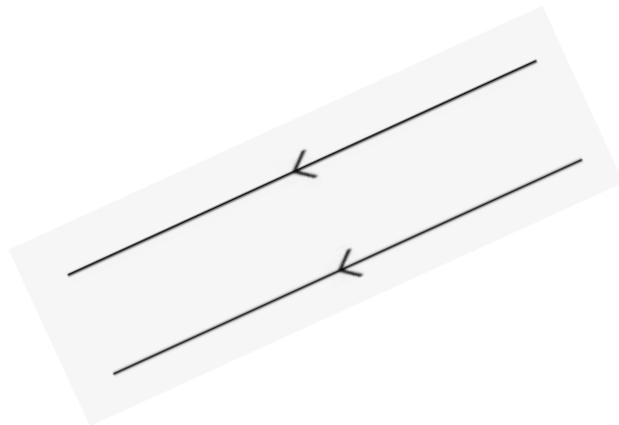
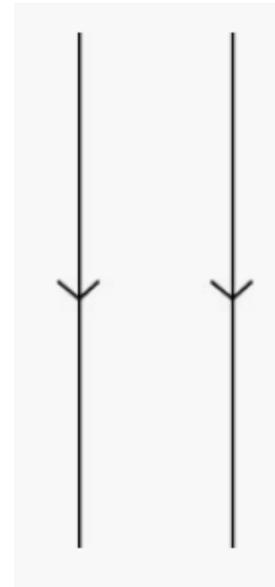
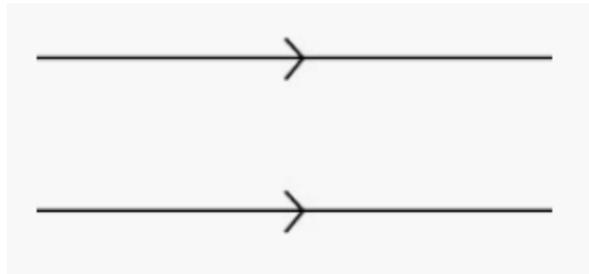
The horizontal lines have been circled and the vertical lines have been highlighted.



How did you do?

Parallel Lines

Parallel lines are lines that will never meet, no matter how long they are.



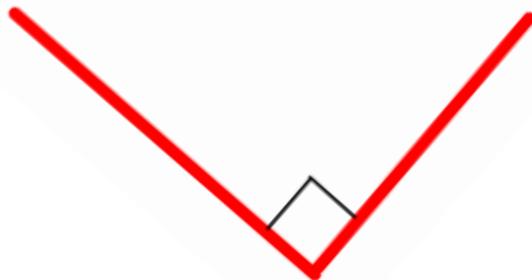
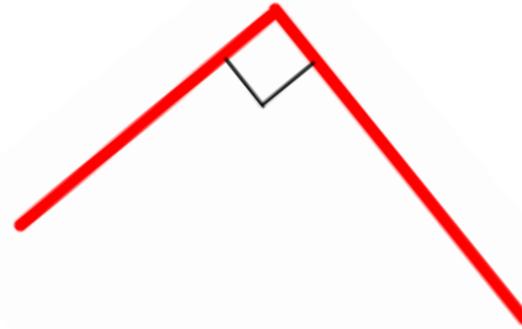
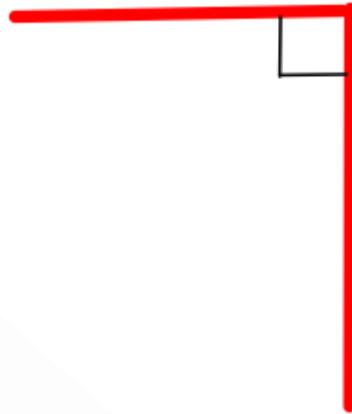
Key Skills:

I can identify parallel and perpendicular lines.

To show that lines are parallel, we use arrows pointing in the same direction.

Perpendicular Lines

Perpendicular lines meet at right angles – this is also a quarter turn.

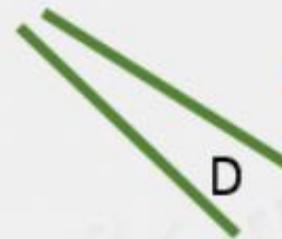
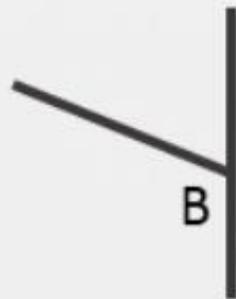
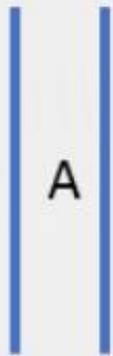


To show that lines are perpendicular, we draw a square to show a right angle.

Learning

Identify which shapes are parallel, perpendicular or neither.

Parallel	Perpendicular	Neither

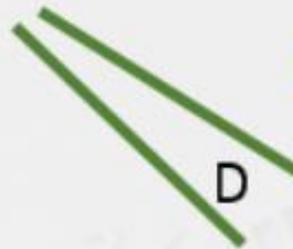
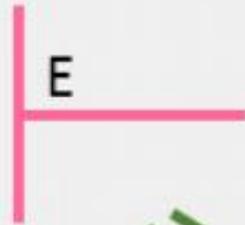
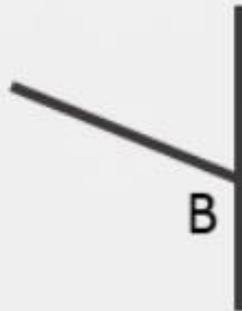
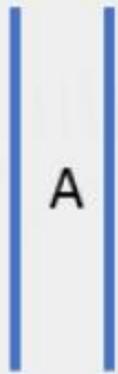


Learning

Answers

Identify which shapes are parallel, perpendicular or neither.

Parallel	Perpendicular	Neither
A F	E C	D B

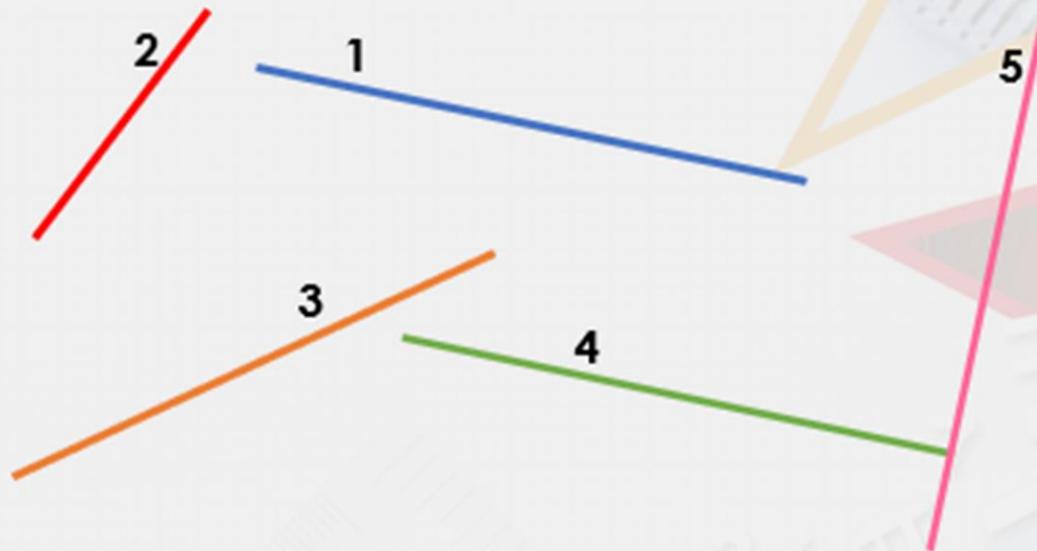


Learning

Complete the sentences below.

Line 1 is parallel to line ____ .

Line 4 is _____ to line 5.



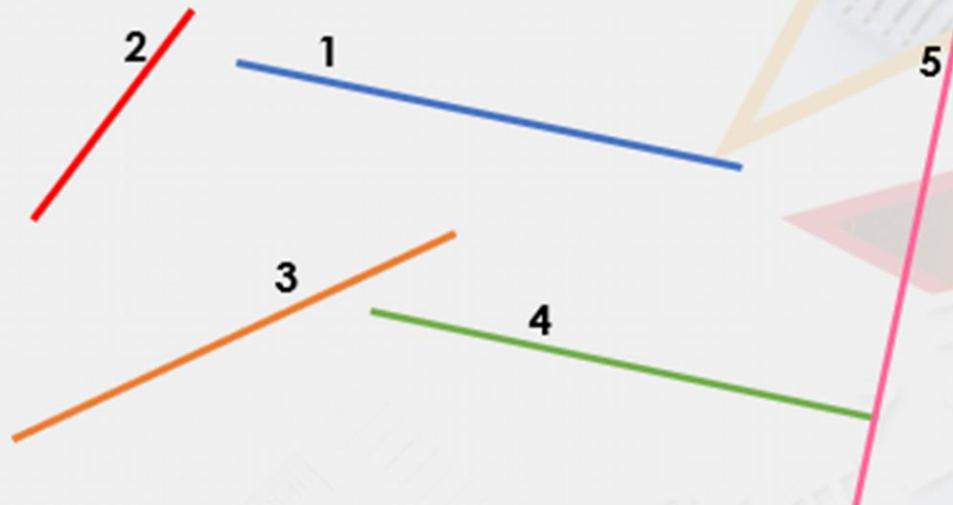
Learning

Answers

Complete the sentences below.

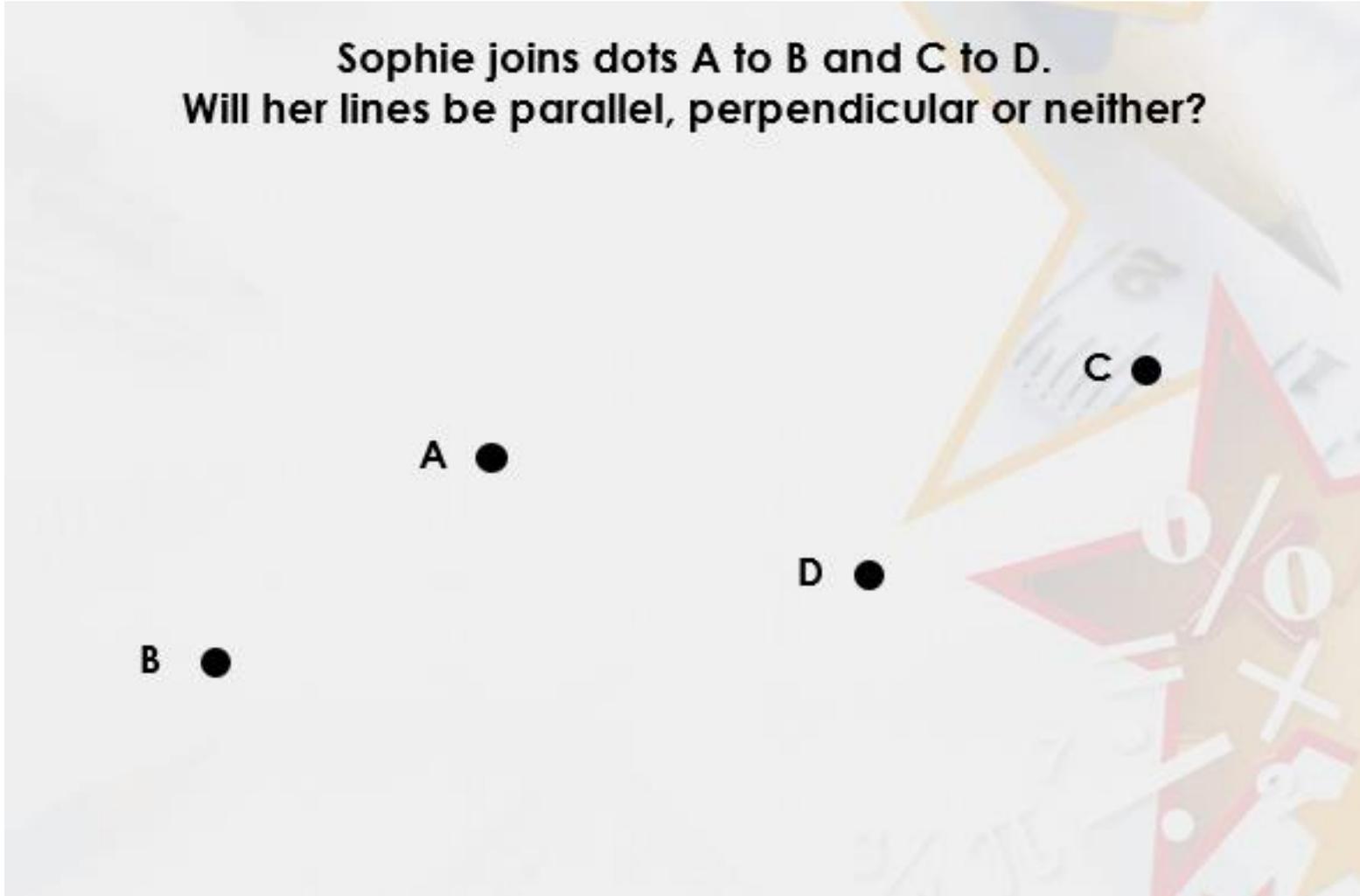
Line 1 is parallel to line 4 .

Line 4 is perpendicular to line 5.



Learning

Sophie joins dots A to B and C to D.
Will her lines be parallel, perpendicular or neither?

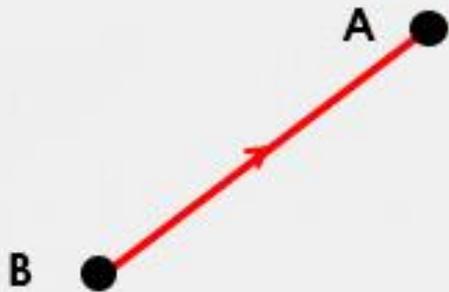


Learning

Answers

Sophie joins dots A to B and C to D.
Will her lines be parallel, perpendicular or neither?

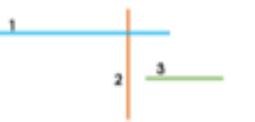
Parallel



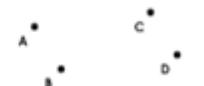
Please see 'Lesson 1 Worksheets and Answers' for today's work.

Lesson 1

K.S. 1 can identify parallel and perpendicular lines in a range of contexts.

<p>1a. Sam joins dots A to B and C to D. Will her lines be parallel, perpendicular or neither?</p> 	<p>1b. Holly joins dots A to B and B to D. Will her lines be parallel, perpendicular or neither?</p> 
<p>2a. Complete the sentences below. Line 1 is perpendicular to line ____. Line 2 is ____ to line 1.</p> 	<p>2b. Complete the sentences below. Line 1 is ____ to line 2. Line 3 is parallel to line ____.</p> 
<p>3a. True or false? This shape has parallel lines.</p> 	<p>3b. True or false? This shape has perpendicular lines.</p> 
<p>4a. Identify a set of perpendicular lines in these shapes</p> 	<p>4b. Identify a set of parallel lines in these shapes</p> 

K.S. 1 can identify parallel and perpendicular lines in a range of contexts.

<p>5a. Katie joins dots A to B and C to D. Will her lines be parallel, perpendicular or neither?</p> 	<p>5b. Sulyan joins dots A to B and B to C. Will his lines be parallel, perpendicular or neither?</p> 
<p>6a. Complete the sentences below. Line 1 is parallel to line ____. Line 3 is ____ to line 2.</p> 	<p>6b. Complete the sentences below. Line 1 is ____ to line 4. Line 3 is parallel to line ____.</p> 
<p>7a. True or false? This irregular quadrilateral has a set of parallel lines.</p> 	<p>7b. True or false? A regular hexagon has perpendicular lines.</p> 
<p>8a. Identify a set of parallel lines in these shapes.</p> 	<p>8b. Identify a set of perpendicular lines in these shapes.</p> 

For worksheets see file named:
Lesson 1 worksheets and answers.
 You can choose clouds, moons or stars.

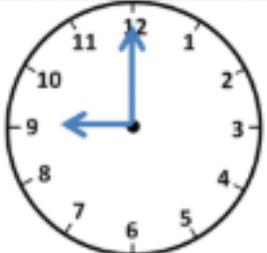
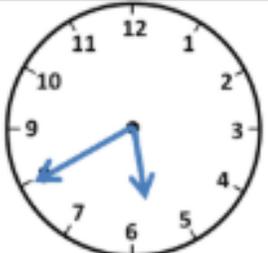
K.S. 1 can identify parallel and perpendicular lines in a range of contexts.

<p>9a. Tamara joins the dots in alphabetical order. Which lines will be perpendicular?</p> 	<p>9b. Jason joins the dots in alphabetical order. Which lines will be parallel?</p> 
<p>10a. Complete the sentences below. Line 7 is parallel to line ____ and line ____. Line 4 is ____ to line 6 and ____ to line 1.</p> 	<p>10b. Complete the sentences below. Line 3 is perpendicular to line ____ and to line ____. Line 2 is ____ to line 4 and ____ to line 5.</p> 
<p>11a. True or false? A square has the same amount of sets of perpendicular and parallel lines.</p> 	<p>11b. True or false? A hexagon has more sets of perpendicular lines than parallel lines.</p> 
<p>12a. Identify a set of parallel lines in these shapes.</p> 	<p>12b. Identify a set of perpendicular lines in these shapes.</p> 

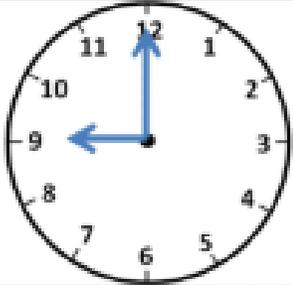
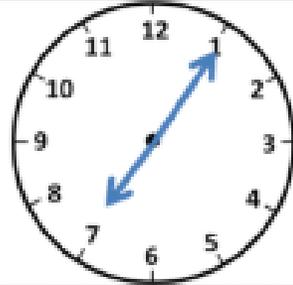
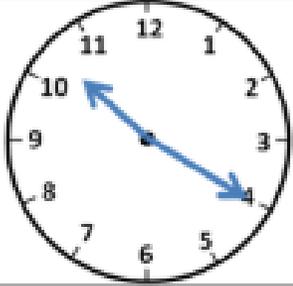
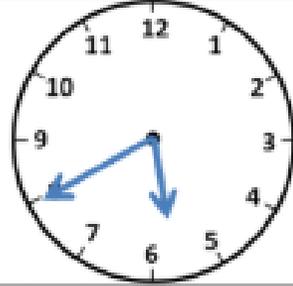
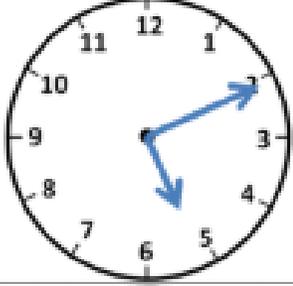
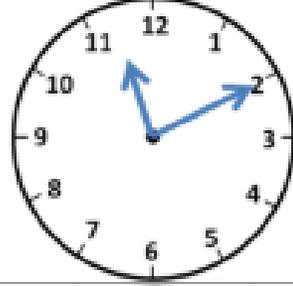
Lesson 2

Warm-up

Write down the correct time in digital.

	5 minutes later	9:05		10 minutes earlier	
	10 minutes earlier			15 minutes later	
	20 minutes later			1 hour earlier	

Answers

	5 minutes later	9:05		10 minutes earlier	<u>6:55</u>
	10 minutes earlier	<u>10:10</u>		15 minutes later	<u>5:55</u>
	20 minutes later	<u>5:30</u>		1 hour earlier	<u>10:10</u>

Learning

Key Skills:

I can identify horizontal and vertical lines of symmetry.

When we look at symmetry, we can talk about a **vertical line of symmetry**.

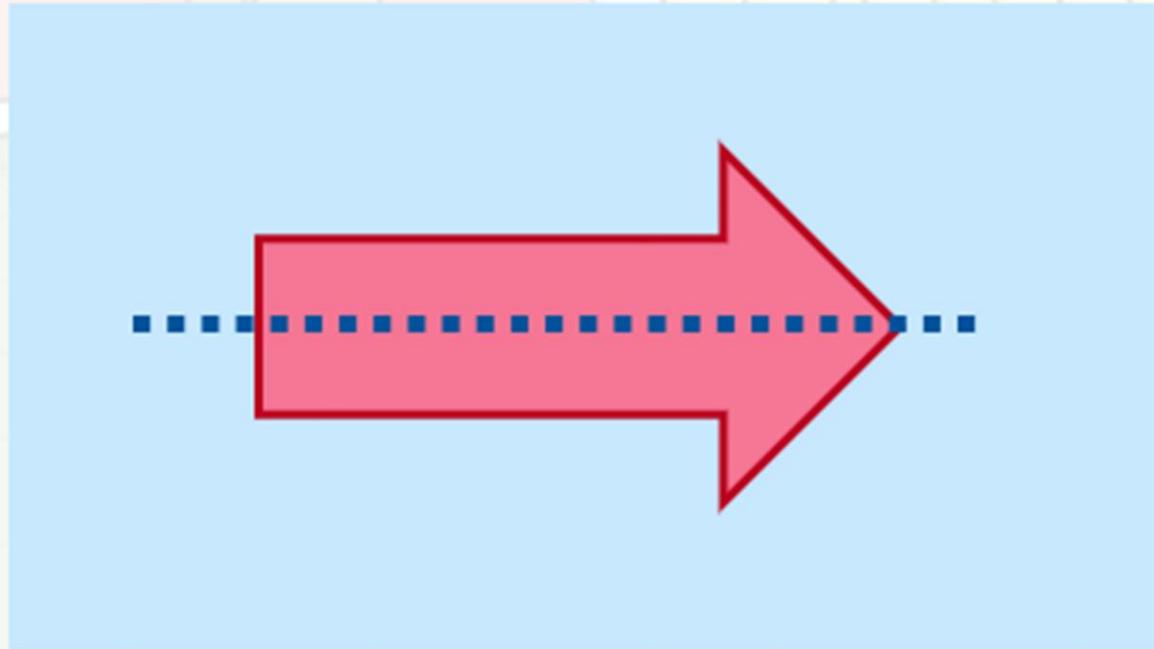
That means that the line of symmetry goes from top to bottom, like this butterfly:



Learning

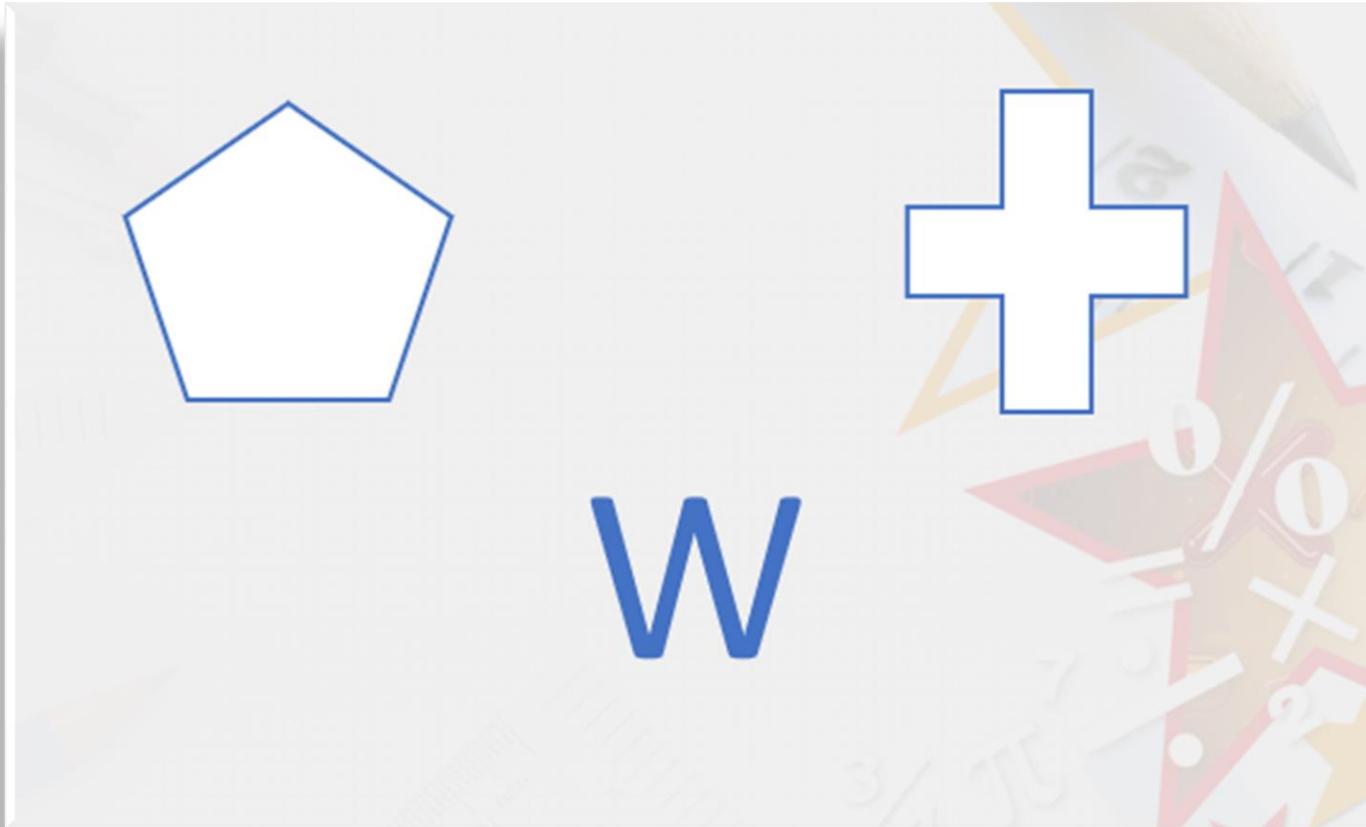
When we look at symmetry, we can talk about a **horizontal line of symmetry**.

That means that the line of symmetry goes from side to side, like this arrow:



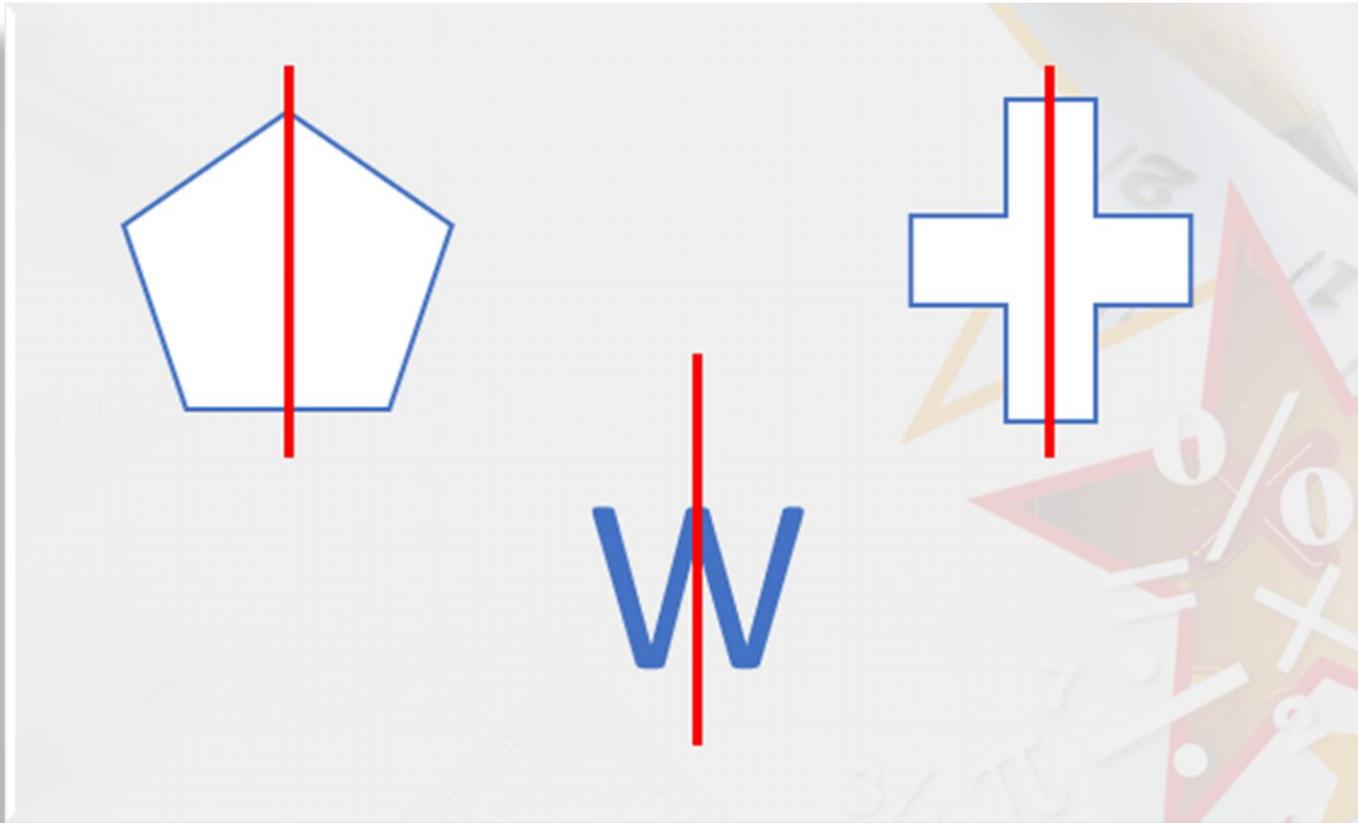
Learning

Identify the vertical lines of symmetry.



Learning

Answers



Learning

Which of the images below has a vertical line of symmetry?



Learning

Answers

Which of the images below has a vertical line of symmetry?



Lesson 2

KS: I can find vertical and horizontal lines of symmetry.

1 Which of these flags has a vertical line of symmetry?

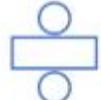
1  2 

2 Which of these flags has a horizontal line of symmetry?

1  2 

3 Draw the horizontal lines of symmetry in these objects.

4 Draw the vertical lines of symmetry in these objects.

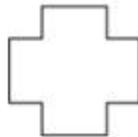
   

C **M**

5. True or false?



This shape only has a vertical line of symmetry.



KS: I can find vertical and horizontal of symmetry.

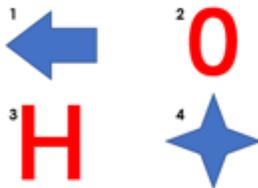
1 Which of the images below has a vertical line of symmetry?

1  2  3 

2 Which of the images below has a horizontal line of symmetry?

1  2 

3 Considering the lines of symmetry, which shape is the odd one out? Explain your answer.



5. True or false?



This shape only has a vertical line of symmetry.



For worksheets see file named: **Lesson 2 worksheets and answers.** You can choose clouds, moons or stars.

KS: I can find vertical and horizontal of symmetry.

1 Which of the images below has a vertical and a horizontal line of symmetry?

1  2  3 

4  5 

2 Which of the images below has a vertical and a horizontal line of symmetry?

1  2  3 

4  5 

3 Considering the lines of symmetry, which shape is the odd one out? Explain your answer.

1  2  3 

4  5 

4 Considering the lines of symmetry, which shape is the odd one out? Explain your answer.

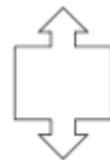
1  2  3 

4  5 

5 True or false?



This shape has more horizontal lines than vertical lines and two lines of symmetry.



Lesson 3

Warm-up

What are the next three even numbers in this pattern?

12, 14 _ _ , _ _ , _ _

Answer



twinkl.com

Lesson 3

Warm-up

Answers

What are the next three even numbers in this pattern?

12, 14 _ _ , _ _ , _ _

16, 18, 20



twinkl.com

Lesson 3

Learning

Key Skills:

I can describe the properties of 2 dimensional (2d) shapes.

We can describe 2d shapes by their properties.

How many **sides** does it have?

How many **vertices or angles** does it have?*

Does it have any **parallel** lines?

Does it have any **perpendicular** lines?

Does it have **lines of symmetry**?

*A vertex or an angle will be used instead of corner.

Vertices means more than one vertex or corner.

Lesson 3

Learning



This square has:

- 4 right-angles (corners)
- 4 straight sides
- 1 horizontal line of symmetry
- 1 vertical line of symmetry
- 2 diagonal lines of symmetry
- 2 sets of parallel lines
- 2 sets of perpendicular lines.

Lesson 3

Learning



A square is also part of a group of shapes known as quadrilaterals.
Quadrilaterals are shapes that have 4 sides.



Parallelogram



Rectangle



Rhombus



Square



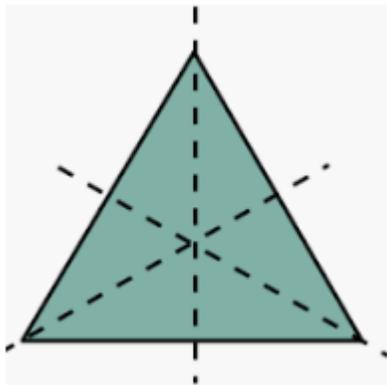
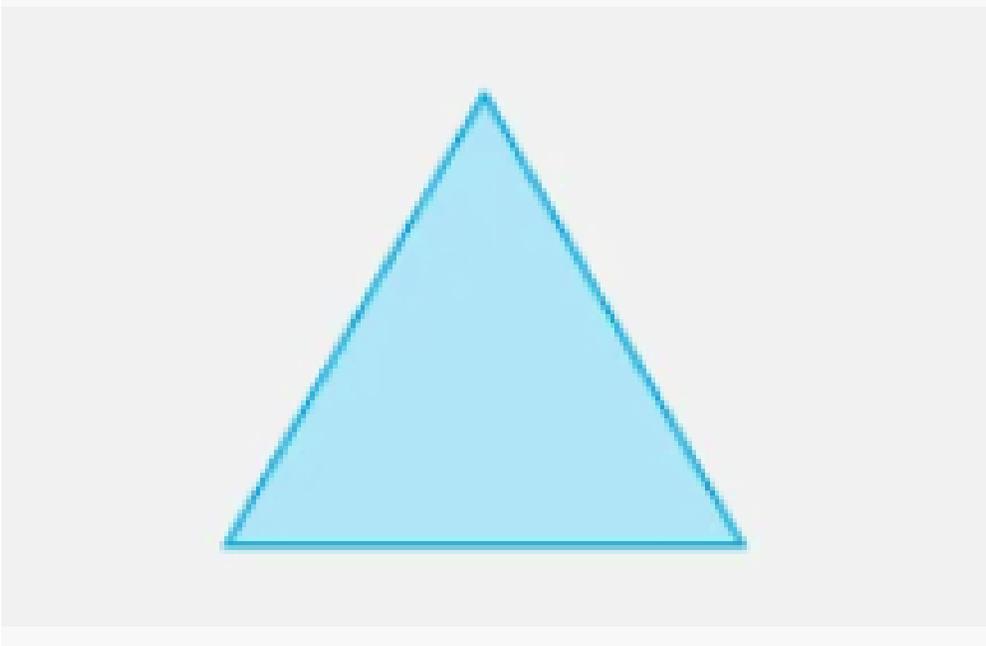
Trapezium (UK)
Trapezoid (US)



Kite

Lesson 3

Learning



This equilateral triangle has:

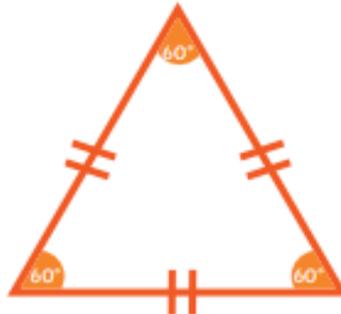
- 3 acute angles(corners)
- 3 straight sides of equal length
- 1 vertical line of symmetry
- 2 diagonal lines of symmetry.

*Not all triangles have the same description.

Information

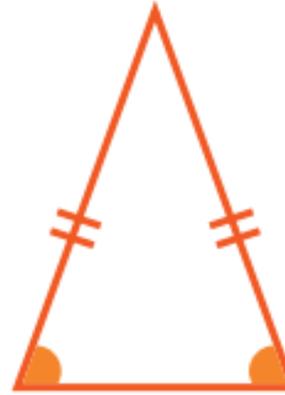
Types of Triangle

equilateral



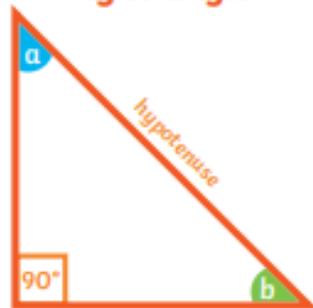
3 equal sides
3 equal angles (60°)

isosceles



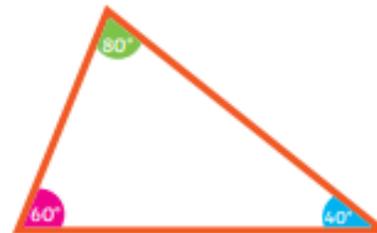
2 equal sides
2 equal angles

right angle



One angle is a right angle (90°)
Two other angles add up to 90°
The longest side is called the hypotenuse.

scalene

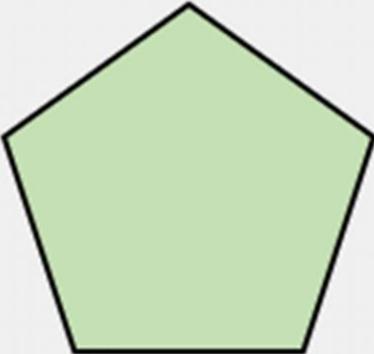


All sides are different
All angles are different.

Lesson 3

Learning

Identify the descriptions that fit this shape.



Equal sides

Fewer than 4 sides

2 pairs of parallel lines

More than 4 sides

All obtuse angles

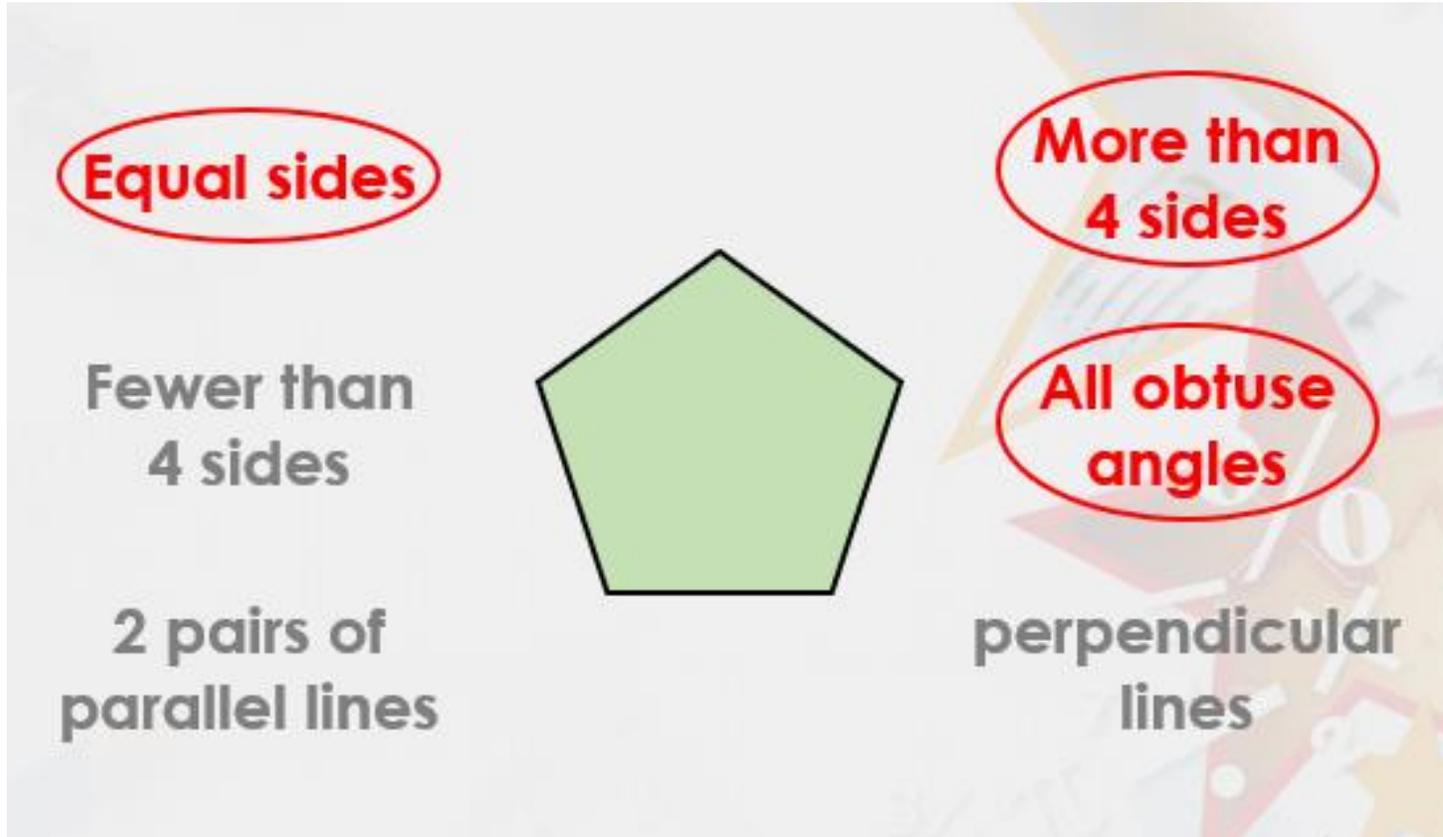
perpendicular lines

Can you name this shape?

Lesson 3

Learning

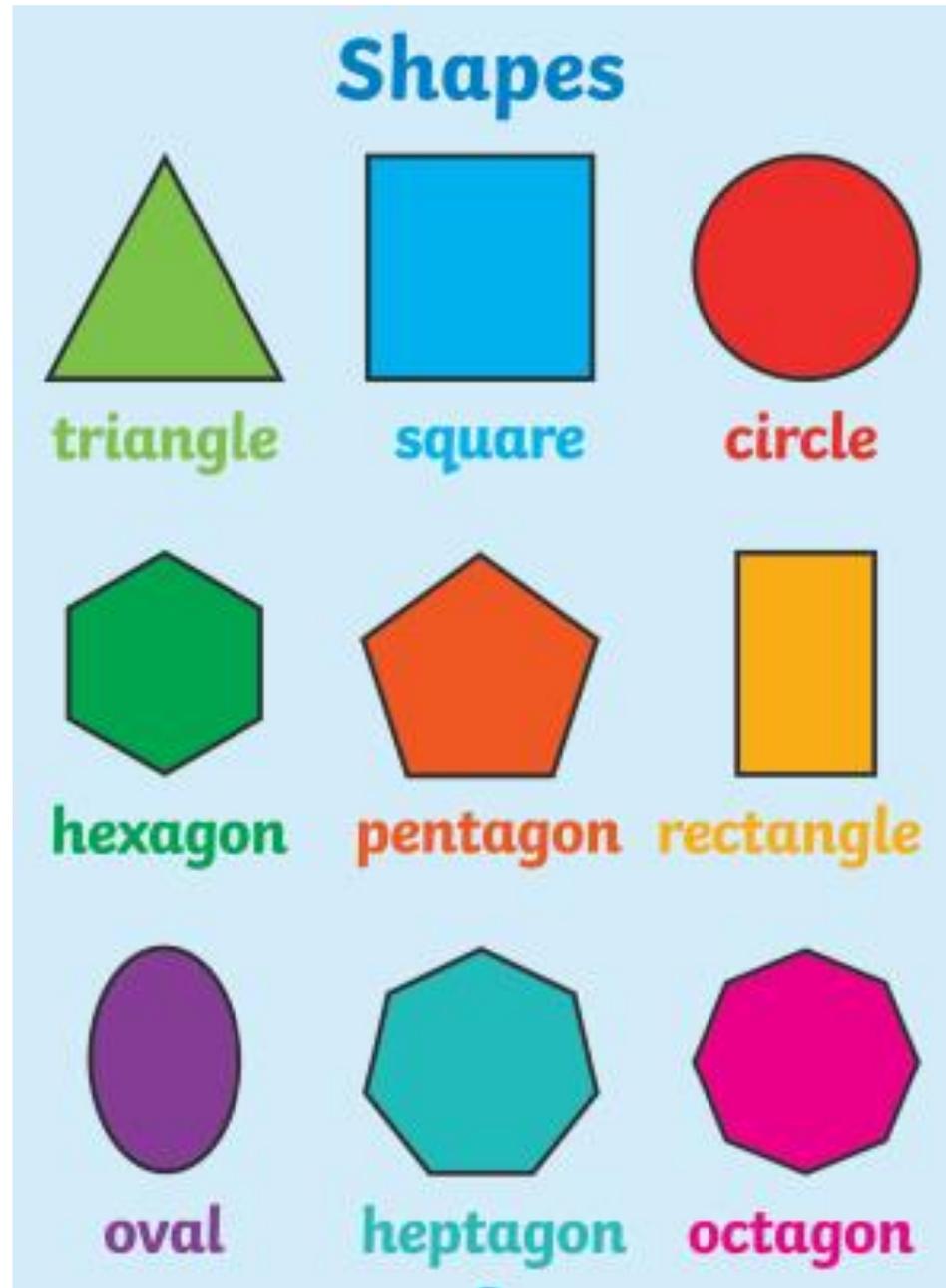
Answers



Regular Pentagon

Regular means that all the sides and angles are equal.

Information

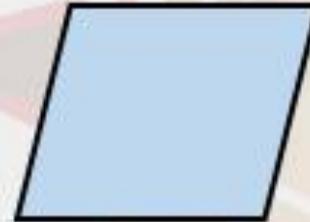
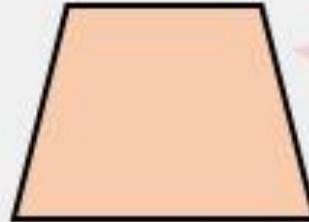
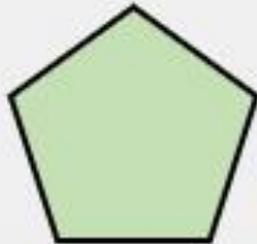
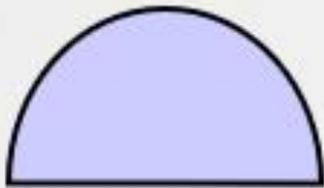


Lesson 3

Learning

Circle one shape which matches the description below.

- Fewer sides than a pentagon.
- 1 line of symmetry.
- No acute angles.



Lesson 3

Learning

Answer

Circle one shape which matches the description below.

- Fewer sides than a pentagon.
- 1 line of symmetry.
- No acute angles.



Lesson 3

Learning

I have no parallel lines.

I have more than 4 sides.

I have less 5 lines of symmetry.

I am a _____.

Now draw me in your book.

Lesson 3

Learning

Answer

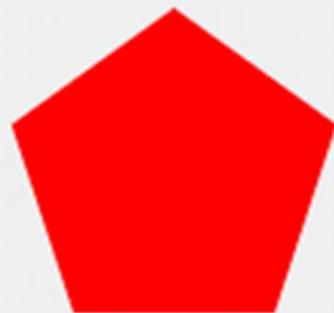
I have no parallel lines.

I have more than 4 sides.

I have less 5 lines of symmetry.

I am a **pentagon**.

Now draw me in your book.



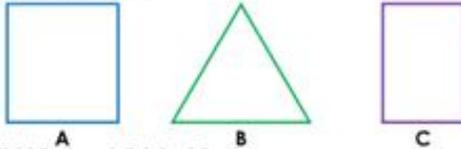
Lesson 3

For worksheets see file named:
Lesson 3 worksheets and Answers.
 You can choose clouds, moons or stars.

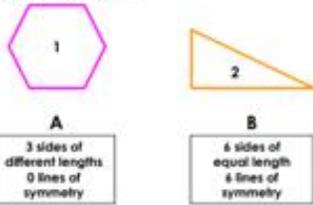
KS: I can describe the properties of 2 dimensional (2d) shapes.

1. True or false?

- Shape A has 4 lines of symmetry.
- Shape B has 4 sides.
- Shape C has 4 equal sides.



2. Match the shapes to their descriptions.



3a. Circle one shape which matches the description below.

- Fewer than 5 sides
- 1 line of symmetry



4a. I have 4 equal sides.

I have 4 lines of symmetry.

I am a _____

Now draw me in your book.

3b. Circle one shape which matches the description below.

- No straight sides
- More than 1 line of symmetry



4b. I have 2 pairs of equal sides.

I have 2 lines of symmetry.

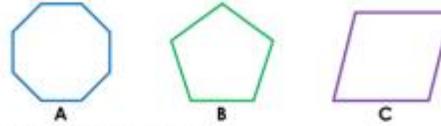
I am a _____

Now draw me in your book.

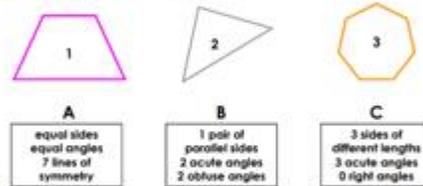
KS: I can describe the properties of 2 dimensional (2d) shapes.

1. True or false?

- Shape A has 4 sides of different lengths.
- Shape B has 5 equal sides and 5 lines of symmetry.
- Shape C has 2 pairs of parallel sides and 4 right angles.



2. Match the shapes to their descriptions.



3a. Circle one shape which matches the description below.

- More than 4 sides
- 5 lines of symmetry
- All obtuse angles



4a. I have no parallel lines.

I have fewer than 4 sides.

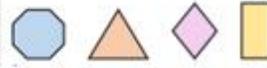
I have 1 line of symmetry.

I am a _____

Now draw me in your book.

3b. Circle one shape which matches the description below.

- More than 3 sides
- 2 lines of symmetry
- 2 acute and 2 obtuse angles



4b. I have 1 set of perpendicular lines.

I have fewer than 4 sides.

I have 2 acute angles.

I am a _____

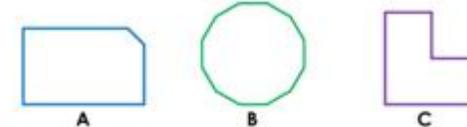
Now draw me in your book.

The above answers are 2 different triangles. But which ones?

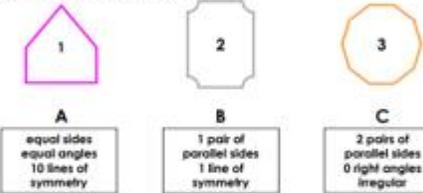
KS: I can describe the properties of 2 dimensional (2d) shapes.

1. True or false?

- Shape A has 4 equal sides, 4 right angles and 2 lines of symmetry.
- Shape B is an irregular shape, has 10 straight sides and 12 acute angles.
- Shape C has 8 straight sides, 2 pairs of parallel sides and 8 right angles.

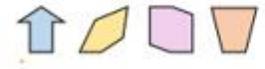


2. Match the shapes to their descriptions.



3a. Circle one shape which matches the description below.

- 1 pair of parallel lines
- 2 right angles
- 1 line of symmetry



4a. I have:

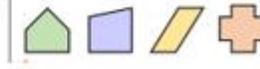
- 0 perpendicular or parallel lines
- 0 lines of symmetry
- more sides than a scalene triangle but fewer sides than a pentagon
- 2 acute and 2 obtuse angles

I am an _____

Now draw me in your book.

3b. Circle one shape which matches the description below.

- 0 lines of symmetry
- 2 sets of perpendicular lines
- 1 acute and 1 obtuse angle



4b. I have:

- 0 perpendicular or parallel lines
- 2 acute angles
- 1 horizontal line but 0 vertical lines
- more sides than a pentagon but fewer than an octagon

I am an _____

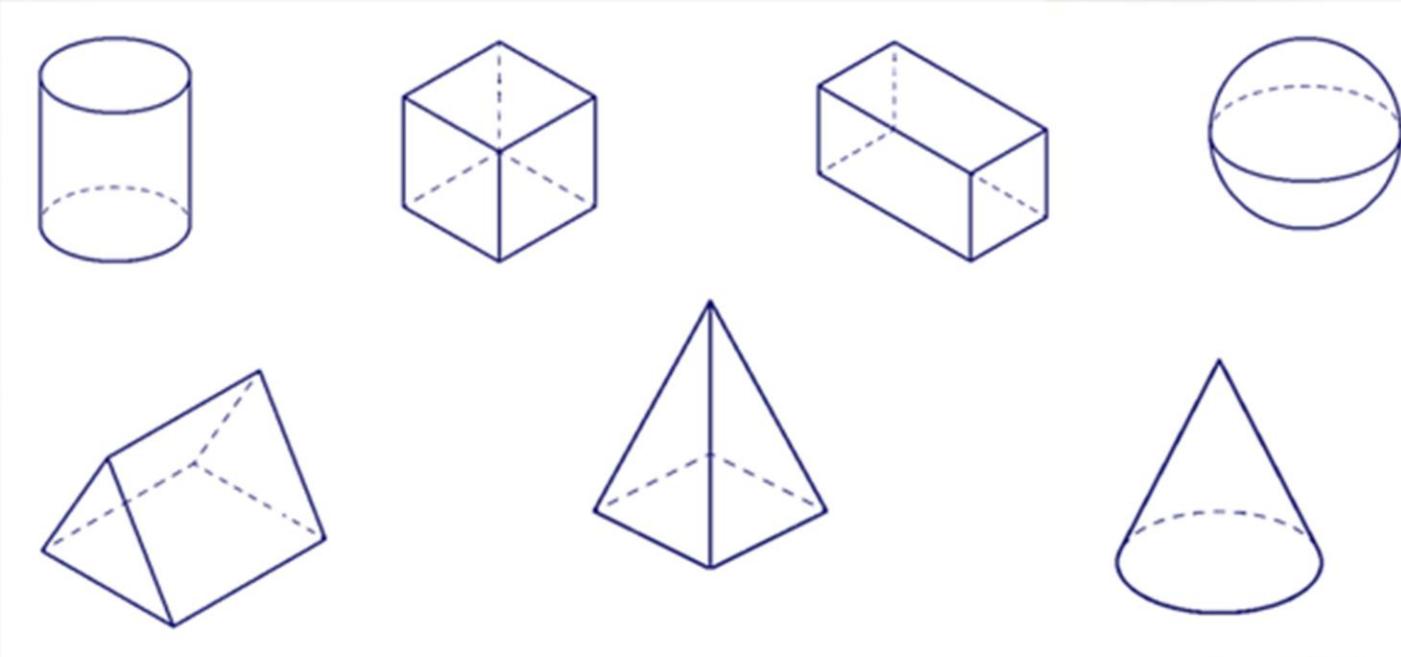
Now draw me in your book.

Lesson 4 Learning

Key Skills:

I can describe and identify 3 dimensional (3d) shapes.

Match the name to the 3D shape.



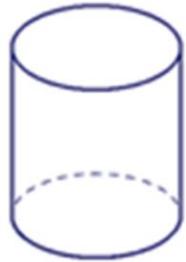
sphere cylinder cone cube cuboid

triangular prism square based pyramid

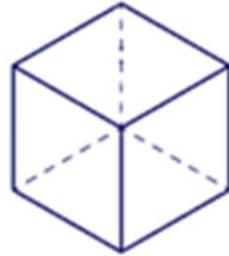
Lesson 4 Learning

Answers

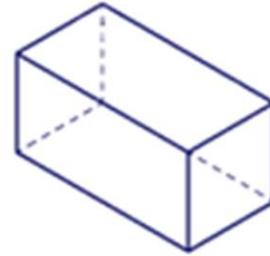
Match the name to the 3D shape.



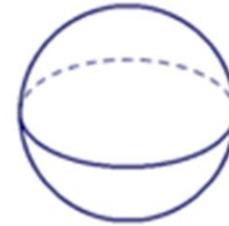
cylinder



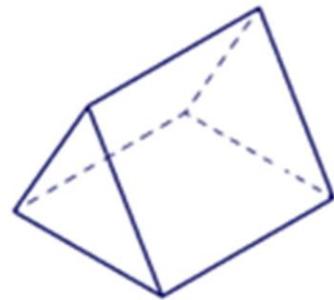
cube



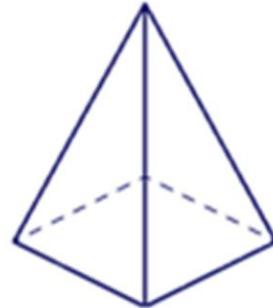
cuboid



sphere



triangular prism



square based pyramid



cone

Lesson 4 Learning

Describing 3d shapes

We can say that a cube has 6 square faces.

Cube

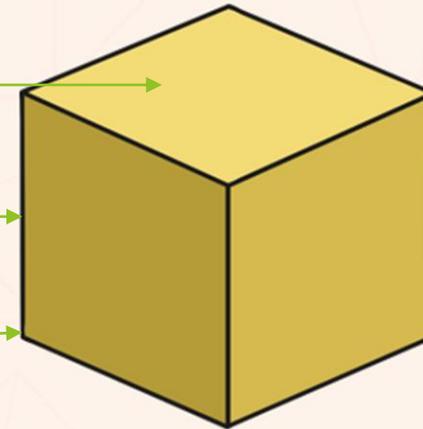
Cubes have:

6 faces;

12 edges

- 8 vertices;

- edges that are all the same length.



Lesson 4 Learning

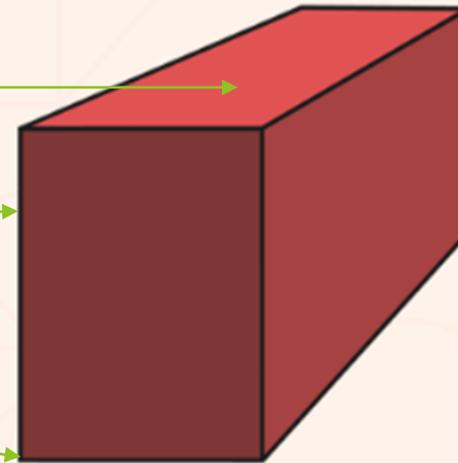
Describing 3d shapes

This cuboid has 6 rectangular shaped faces.

Cuboid

Cuboids have:

- 6 faces;
- 12 edges;
- 8 vertices;
- edges that are **not** all the same length.



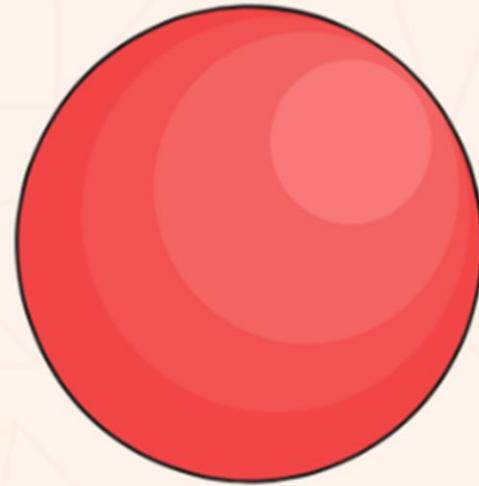
Lesson 4 Learning

Describing 3d shapes

Sphere

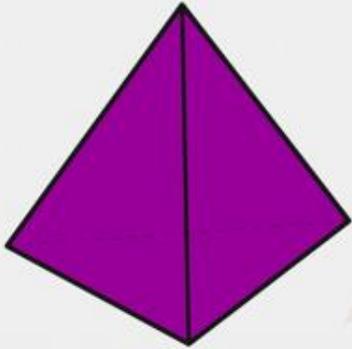
Spheres:

- are perfectly round;
- have no edges;
- have no vertices.
- 1 curved surface



Lesson 4

True or false?

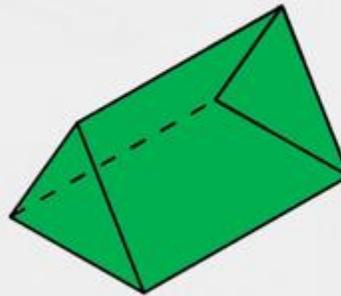


A triangular based pyramid has 4 vertices.

Use the shapes on Lesson 4 slide 2 to help.

Try these tasks.

Tick the statements which relate to the shape.

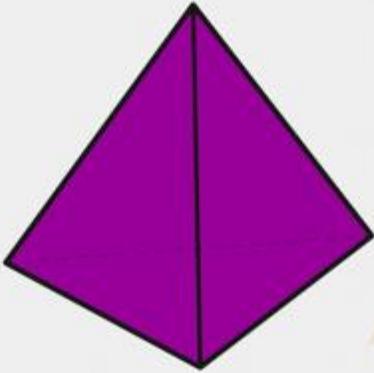


2 triangular faces	<input type="checkbox"/>
6 vertices	<input type="checkbox"/>
It is a triangular based pyramid	<input type="checkbox"/>

Lesson 4

Answers

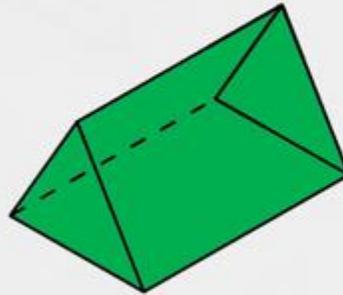
True or false?



A triangular based pyramid has 4 vertices.

True

Tick the statements which relate to the shape.



2 triangular faces



6 vertices



It is a triangular based pyramid

Lesson 4

Learning

Circle the shapes that have more than 5 edges.

cone

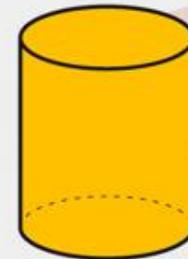
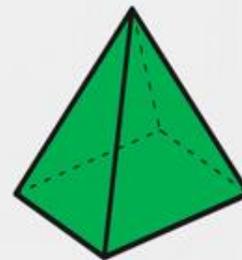
square
based
pyramid

cuboid

Are the following statements always true, sometimes true or never true?

A) A square based pyramid has 4 vertices.

B) A cylinder has more curved edges than a cone.



Lesson 4

Learning

Circle the shapes that have more than 5 edges.

cone

square
based
pyramid

cuboid

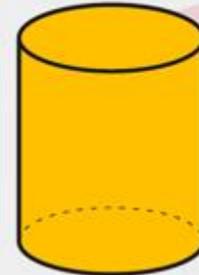
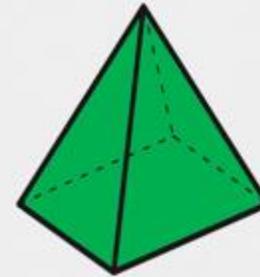
Are the following statements always true, sometimes true or never true?

A) A square based pyramid has 4 vertices.

Never true

B) A cylinder has more curved edges than a cone.

Always true



Lesson 4

For worksheets see file named:
Lesson 4 worksheets and answers.
 You can choose clouds, moons or stars.

KS: I can describe the properties of 3 dimensional (3d) shapes.

1a. True or false?

 A cuboid has 8 faces.

1b. True or false?

 A cylinder has 2 vertices.

2a. Tick the statements which relate to the shape.


2 surfaces	
1 vertex	
It is a sphere	

2b. Tick the statements which relate to the shape.


2 vertices	
4 faces	
8 edges	

3a. Circle the shapes that have a curved surface.
 cylinder cuboid sphere square based pyramid cone cone

3b. Circle the shapes that have at least one square face.
 cylinder cuboid sphere square based pyramid cone cone

4. Match the shapes to the correct descriptions.

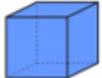
1  2  3 

A 3 faces 0 edges 0 vertices
 B 1 curved surface 1 circular base 1 edge 1 vertex
 C 1 curved surface 2 faces 2 curved edges 0 vertices

KS: I can describe the properties of 3 dimensional (3d) shapes.

5a. True or false?

 A sphere has no edges.

5b. True or false?

 A cube has 8 faces.

6a. Tick the statements which relate to the shape.


2 edges	
1 surface	
3 faces	

6b. Tick the statements which relate to the shape.


6 edges	
4 faces	
5 vertices	

7a. Circle the shapes that have more than 5 edges.
 cuboid sphere cube cube cone square based pyramid

7b. Circle the shapes that have fewer than 7 vertices.
 cuboid sphere cube cube cone square based pyramid

4. Match the shapes to the correct descriptions.

1  2  3 

A 1 curved surface 0 edges 0 vertices
 B 6 faces 12 edges 8 vertices
 C 5 faces 9 edges 6 vertices

KS: I can describe the properties of 3 dimensional (3d) shapes.

9a. True or false?

 An octagonal prism has 24 edges.

9b. True or false?

 A cuboid has 6 vertices.

10a. Tick the statements which relate to the shape.


12 vertices	
7 faces	
It is a pentagonal prism	

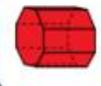
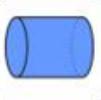
10b. Tick the statements which relate to the shape.


10 edges	
7 vertices	
It is a pentagonal based pyramid	

11a. Circle the shapes that have the same number of edges as a cuboid.
 triangular prism tetrahedron cube hexagonal pyramid cone triangular prism

11b. Circle the shapes that have between 2 and 7 triangular faces.
 triangular prism tetrahedron cube hexagonal pyramid cone triangular prism

7. Match the shapes to the correct descriptions.

1  2  3 

A 3 faces 2 edges 0 vertices
 B 10 faces 24 edges 16 vertices
 C 4 faces 6 edges 4 vertices

Lesson 5

Today we are going to take a break from fractions and concentrate on our mental maths skills. On the next few pages you will find a PALs test, a mental maths test, and the answers. Don't forget to use TTrackstars and check the Year 3 blog to see if your name appears.

Name: _____

$300 + 8 + 50 =$

$348 - 20 =$

$348 - 200 =$

PAL 3:2
Challenge
Week 3



____, 13, 16, 19, ____

125, 150, ____, ____, 225

$16 \div 4 =$

$4 \times \square = 24$

$143 + 52 =$

$81 - 42 =$

$$\begin{array}{r} 352 \\ + 374 \\ \hline \hline \end{array}$$

$$\begin{array}{r} 562 \\ - 216 \\ \hline \hline \end{array}$$

432
How many to the next 10?

$18 \div 2 =$

$21 \div 3 =$

$38 + 6 - 3 =$

My score

12

Answers

Name:

$$300 + 8 + 50 =$$

385

$$348 - 20 = 328$$

$$348 - 200 = 148$$

PAL 3:2
Challenge
Week 3



10, 13, 16, 19, 22

125, 150, 175, 200, 225

$$16 \div 4 =$$

$$4 \times \boxed{6} = 24$$

$$143 + 52 =$$

195

$$81 - 42 =$$

39

$$\begin{array}{r} 352 \\ + 374 \\ \hline 726 \end{array}$$

$$\begin{array}{r} 562 \\ - 216 \\ \hline 346 \end{array}$$

432

How many to the next 10?

8

$$18 \div 2 = 9$$

$$21 \div 3 = 7$$

$$38 + 6 - 3 =$$

41

My score

12

Additional Resources

<https://www.topmarks.co.uk/maths-games/hit-the-button>

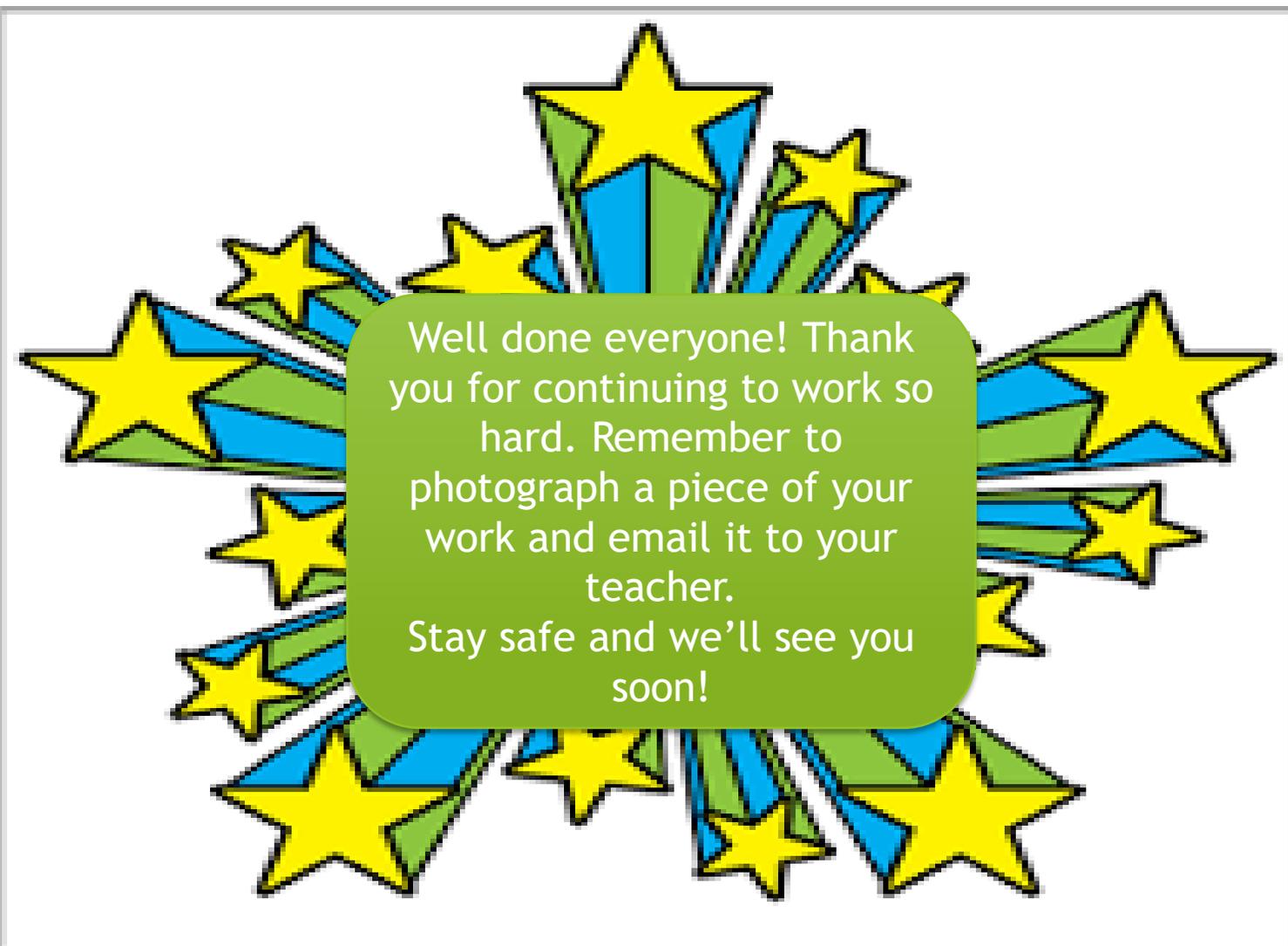
<https://www.topmarks.co.uk/maths-games/daily10>

- Choose level 2
- Then multiplication or division

<https://www.topmarks.co.uk/Search.aspx?q=year%203>

- Select Maths
- Then select Key Stage 2
- Choose a game or skill of your choice.

<https://www.bbc.co.uk/bitesize/tags/zmyxxyc/year-3-and-p4-lessons>



Well done everyone! Thank you for continuing to work so hard. Remember to photograph a piece of your work and email it to your teacher. Stay safe and we'll see you soon!