

# 2D SHAPES

## GRADE 1

### Examination practice questions

**You should have:**

A ruler, protractor, compasses, a pen, pencil, eraser, calculator.  
For some questions, you may need tracing paper.

### Instructions

- Use **black** ink or ball-point pen.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators may be used.**

### Information

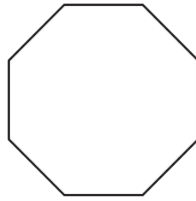
- The marks for each question are shown in brackets.
- Use the number of marks for each question as a guide as to how much time to spend on each question. As a rough guide, you can multiply the number of marks by 1.2 to see how many minutes you should spend on a question.
- Questions been carefully compiled from or modelled on a variety of past papers and will generally get more challenging as the document progresses. Some of the latter questions will go beyond the core grade level for this topic.

### Advice

- Read each question carefully before you start to answer it.
- Don't forget to have fun.
- Check your answers at the end.

**Q1.**

Write down the mathematical name of this polygon.

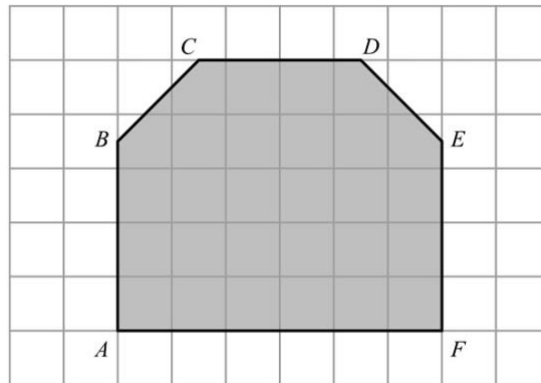


.....

**(1 mark)**

**Q2.**

Here is polygon *ABCDEF* on a square grid.



Select the mathematical name of the polygon.

.....

**(1 mark)**

**Q3.**

The diagram shows a 5-sided polygon.

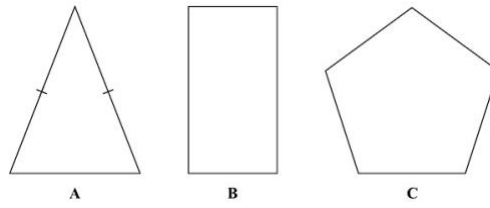


Write down the mathematical name of a 5-sided polygon.

.....

**(1 mark)**

Here are three shapes.



Shape **A** is a triangle.

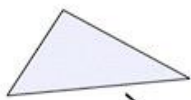
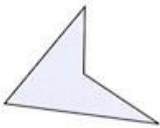
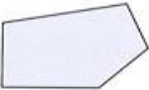

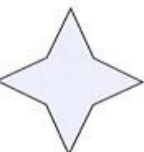
Select the mathematical name for this type of triangle

.....

**(1 mark)**

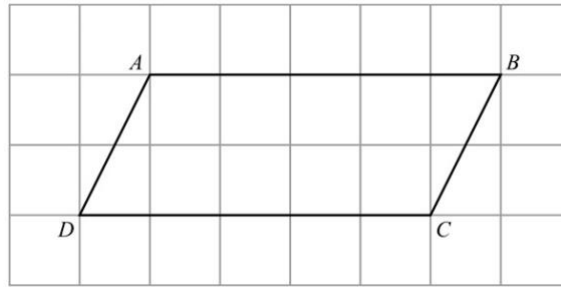
Match each shape to the correct name.

One has been done for you.

<b>A</b>		pentagon
<b>B</b>		triangle
<b>C</b>		octagon
<b>D</b>		quadrilateral
<b>E</b>		hexagon

**(2 marks)**

The diagram shows a quadrilateral  $ABCD$  drawn on a square grid.

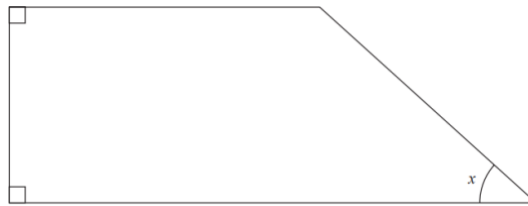


Select the mathematical name of quadrilateral  $ABCD$ .

.....

**(1 mark)**

Here is a quadrilateral.



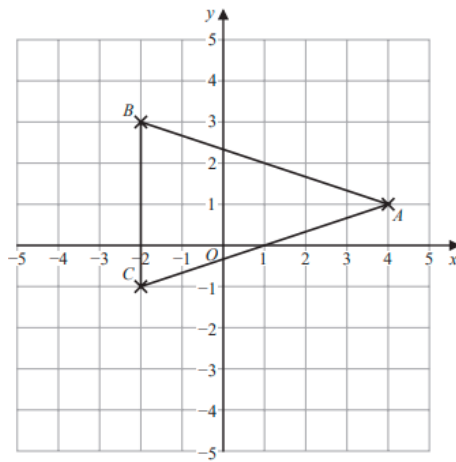
What is the mathematical name of this quadrilateral?

.....

**(1 mark)**

**Q8.**

The points  $A$ ,  $B$  and  $C$ , shown on the grid, are the vertices of triangle  $ABC$ .



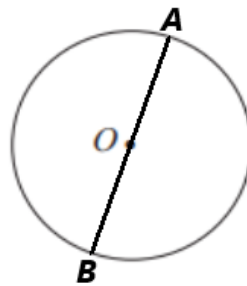
Write down the mathematical name of triangle  $ABC$ .

.....

**(1 mark)**

**Q9.**

The diagram shows a circle with centre  $O$ .

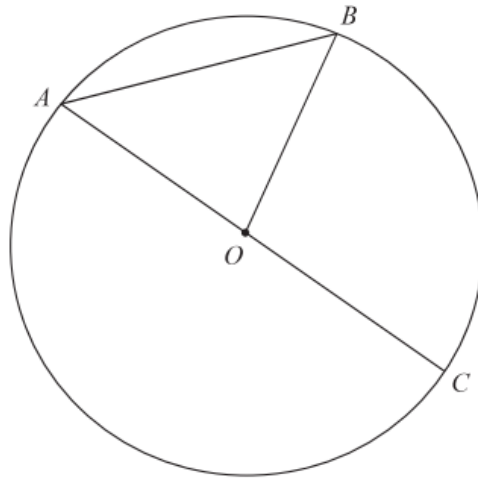


What name is given to the line  $AB$ ?

.....

**(1 mark)**

$A, B$  and  $C$  are points on a circle, centre  $O$ .  
 $AOC$  is a straight line.



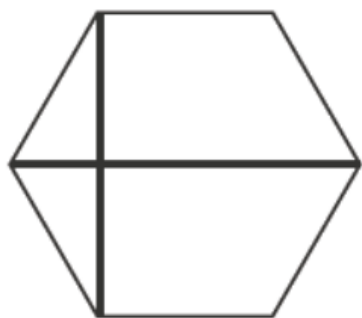
Write down the mathematical name for the line  $AB$ .

.....

**(1 mark)**

Here is a hexagon.

A student is asked to draw **two** lines across the hexagon to make two triangles and two quadrilaterals.



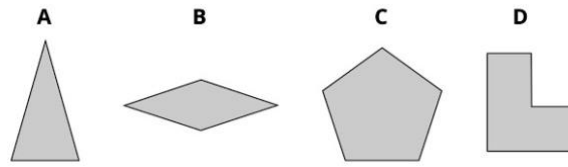
This is their attempt.

Is this correct?

.....

**(1 mark)**

Which shape below is a regular polygon?



.....

**(1 mark)**

For each of the following statements, state whether it is TRUE or FALSE



The shape on the left above is a pentagon. ....

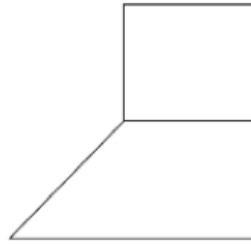
The straight line shown in the circle above is a diameter. ....

All quadrilaterals can be split into two triangles. ....

All isosceles triangles have 3 sides of equal length. ....

**(2 marks)**

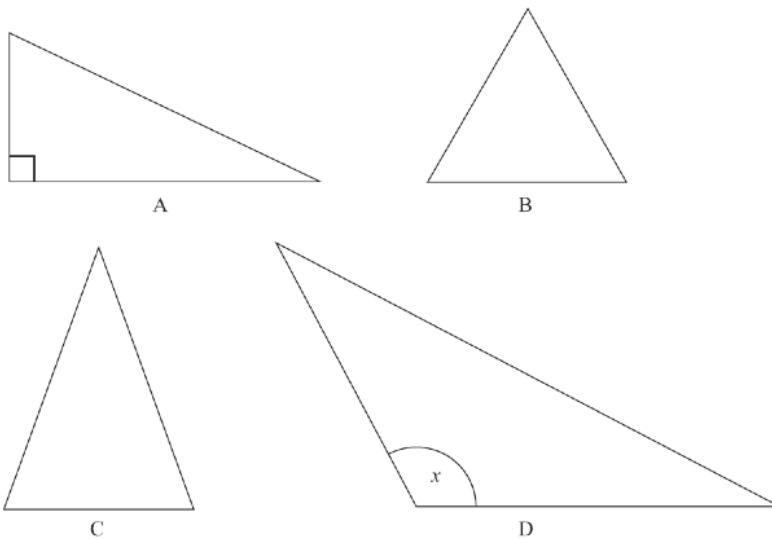
Here is a square and a trapezium.



Write down the size of each angle of the square.

.....

**(1 mark)**



One of these triangles is an equilateral triangle.

Write down the letter of the equilateral triangle.

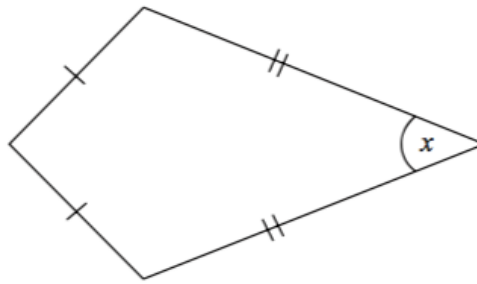
.....

**(1 mark)**

**Q16.**

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This quadrilateral has two pairs of equal sides.



Write down the special name for the quadrilateral.

.....

**(1 mark)**

**Q17.**

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A shape has no right angles.  
It has 4 straight sides.  
It has 2 pairs of parallel lines.

What is the name of the shape?

.....

**(1 mark)**

**Q18.**

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Robin is describing a shape to her friend Lilly.

Robin says,

*“The shape has four sides.  
It only has one pair of parallel sides.”*

What shape is Robin describing?

.....

**(1 mark)**

**Q19.**

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A shape which is not a square has 4 right angles.  
It has 4 straight sides.  
It has 2 pairs of parallel lines.

What is the name of the shape?

.....

**(1 mark)**

**Q20.**

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A quadrilateral has four angles. Each angle is  $90^\circ$ .

Write down the mathematical name of this quadrilateral.

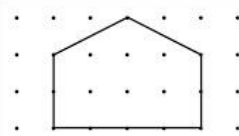
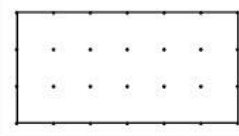
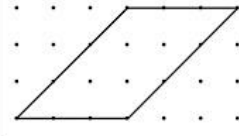
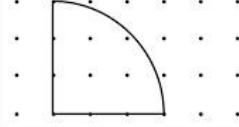
.....

**(1 mark)**

**Q21.**

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Complete the table.

Shape	It is a quadrilateral	It has one or more right angles
	<b>x</b>	<b>✓</b>
		
		
		

.....

**(1 mark)**

Q22.

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A square always has four sides.

Is it true that a four-sided shape is always a square?

.....

(1 mark)

Q23.

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Here are six quadrilaterals with their mathematical names.



square



parallelogram



rhombus



oblong



kite



trapezium

Stefan chooses one of the quadrilaterals. He says,

**'It has more than one obtuse angle.**

**It has no parallel sides'.**

Which quadrilateral did Stefan choose?

.....

(1 mark)

Q24.

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A bicycle wheel has a diameter of 64 cm.

What is the **radius** of the bicycle wheel?

.....

(1 mark)

**Q25.**

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Murshad has a collection of short rods and long rods.  
The short rods have a length of  $x$  cm.  
The long rods have a length of  $y$  cm.

Murshad makes a regular polygon with some short rods.  
The formula for the perimeter,  $P$  cm, of this polygon is  $P = 5x$ .

What is the mathematical name of this polygon?

.....

**(1 mark)**

**Q26.**

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Ben draws a shape that has:

- 4 sides,
- 4 angles of equal size,
- a pair of sides of length 4 cm, and
- a pair of sides of length 6 cm.

What type of shape has Ben drawn?

.....

**(1 mark)**

**Q27.**

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The number of diagonals of a regular polygon equals twice the number of sides.

How many sides has the polygon?

.....

**(1 mark)**