

G2...Quadrilaterals - Properties of Quads

OCR

2 (a) Sketch the quadrilateral described below.

- Opposite angles are equal.
- Opposite sides are equal.
- Opposite sides are parallel.
- Diagonals are not equal.

[1]

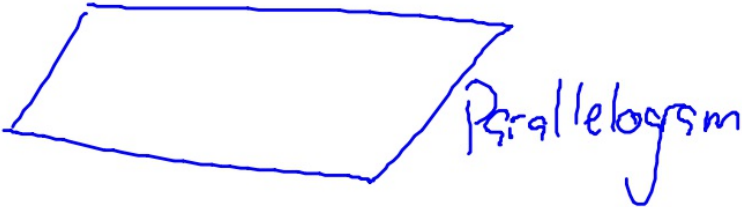
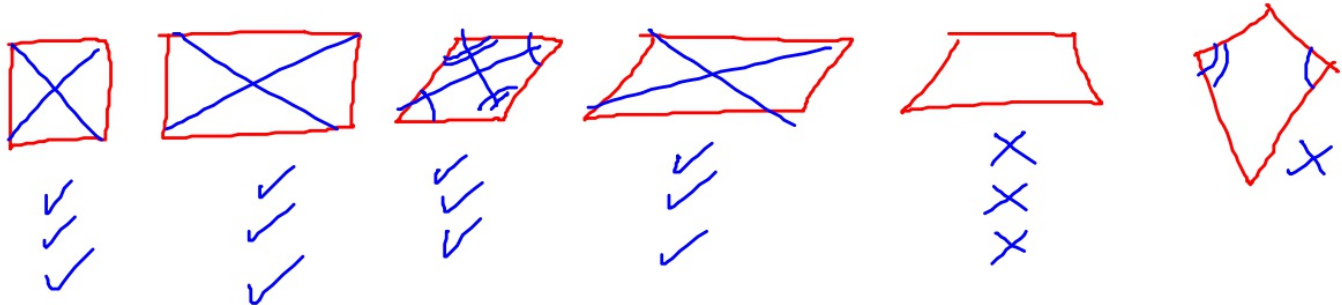
(b) Write down the name of the quadrilateral.

(b) [1]

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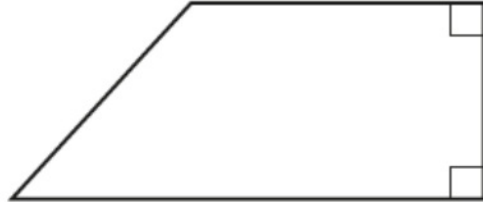
[1]



(b) Write down the name of the quadrilateral.

(b) Parallelogram [1]

1 (a) Write down the mathematical name of this shape.

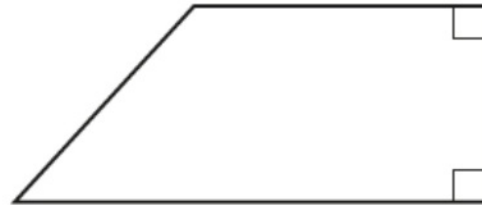


(a) [1]

(b) How many faces does a cube have?

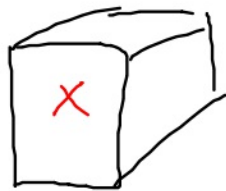
(b) [1]

1 (a) Write down the mathematical name of this shape.



(a) Trapezium [1]

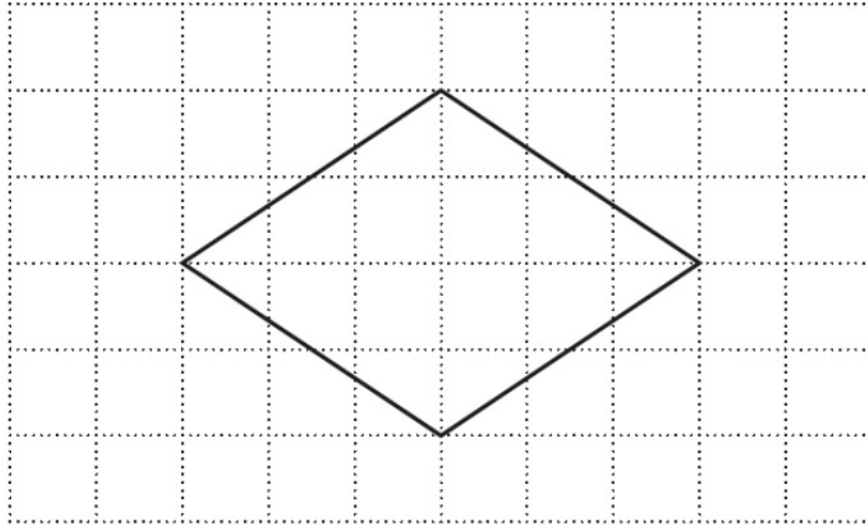
(b) How many faces does a cube have?



(b) 6 [1]

5 A shape is drawn on a one-centimetre grid.

Created by W Neill



(b) How many lines of symmetry does the shape have?

G1

(c) Work out the area of the shape.

(a) Ring the mathematical name of the shape.

G2

Pentagon

Square

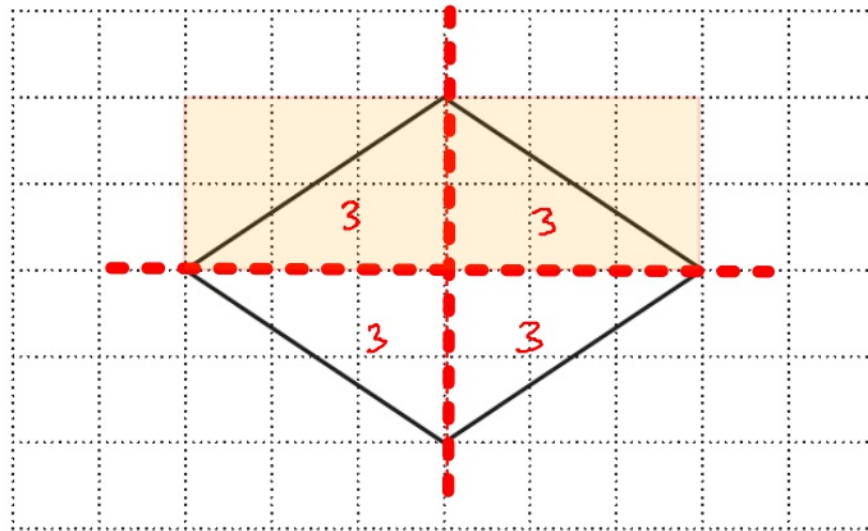
Octagon

Rhombus

[1]

5 A shape is drawn on a one-centimetre grid.

Created by W Neill



(b) How many lines of symmetry does the shape have?

G1

2

(c) Work out the area of the shape.

Area of orange rectangle
 $6 \times 2 = 12 \text{ cm}^2$

(a) Ring the mathematical name of the shape.

G2

Pentagon

Square

Octagon

Rhombus

[1]

(b) These are the names of some special quadrilaterals.

G2

- | | |
|-----------|---------------|
| rectangle | parallelogram |
| trapezium | kite rhombus |

Choose a quadrilateral from the list that satisfies each set of conditions.

- (i)**
- All four sides are the same length.
 - Opposite angles are equal.

(b)(i) [1]

- (ii)**
- All four angles are right angles.
 - Opposite sides are equal.

(ii) [1]

(b) These are the names of some special quadrilaterals.

G2

rectangle ✓✓	parallelogram ✗	
trapezium ✗	kite ✗	rhombus ✗

Choose a quadrilateral from the list that satisfies each set of conditions.

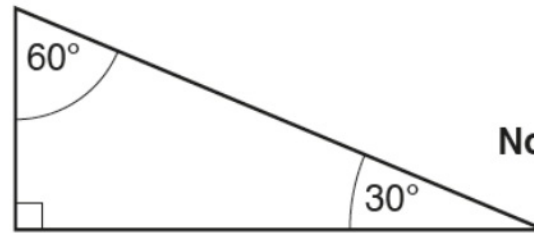
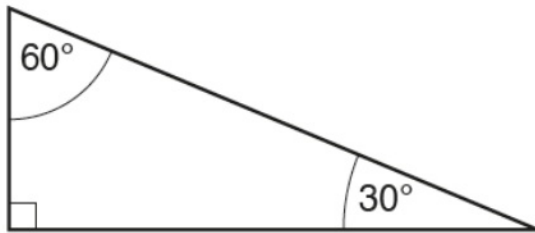
- (i) • All four sides are the same length.
• Opposite angles are equal.

(b)(i) rhombus [1]

- (ii) • All four angles are right angles. ✓
• Opposite sides are equal.

(ii) rectangle [1]

10 Here are two identical tiles.



Not to scale

(a) Sketch two quadrilaterals that can be made by joining the tiles.
Write the mathematical name of each quadrilateral.

62

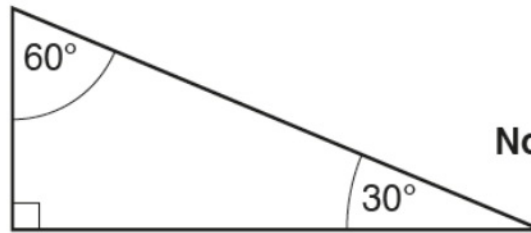
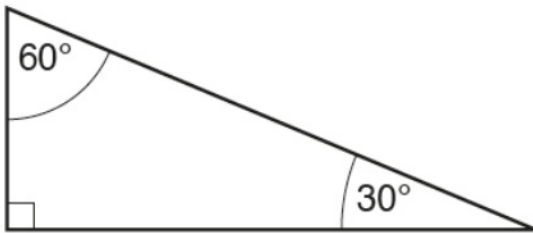
Quadrilateral 1:

Quadrilateral 2:

Name:

Name: [4]

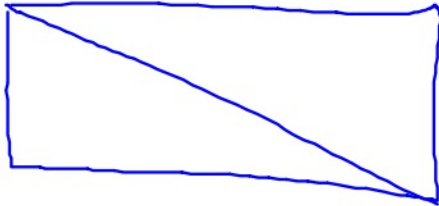
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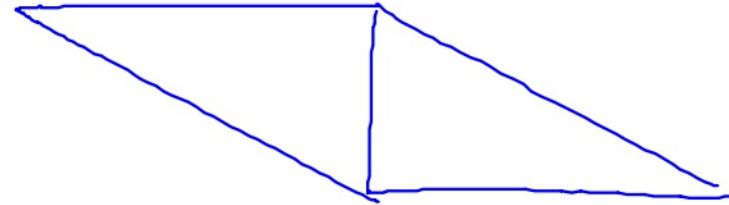
62

Quadrilateral 1:



Name: Rectangle

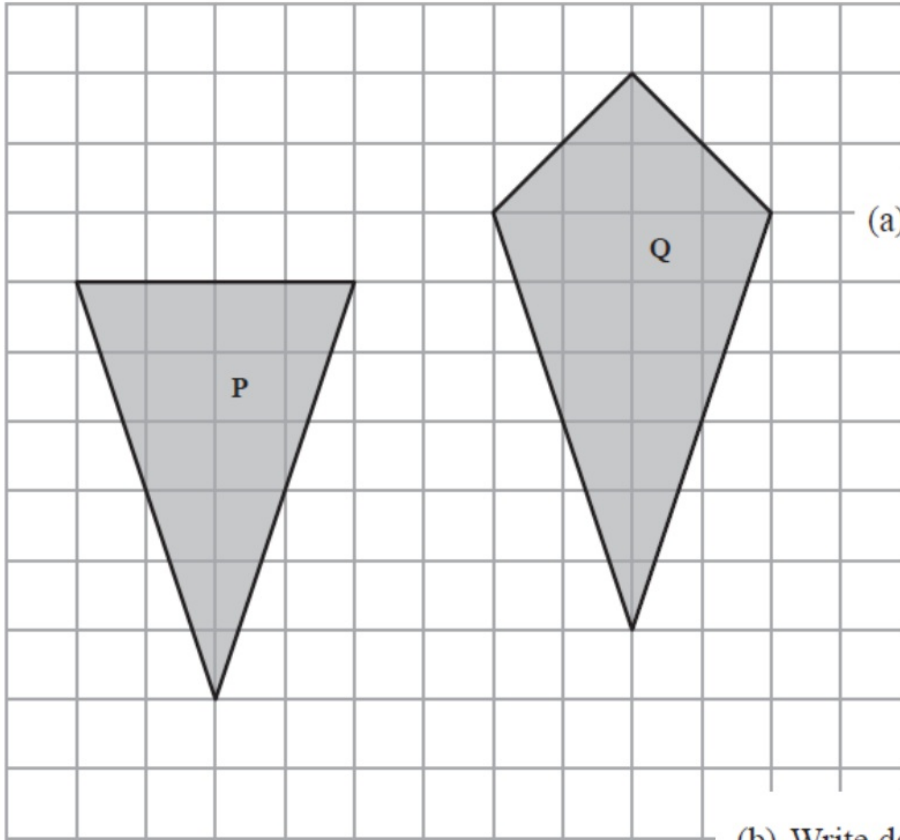
Quadrilateral 2:



Name: Parallelogram [4]

Edexcel

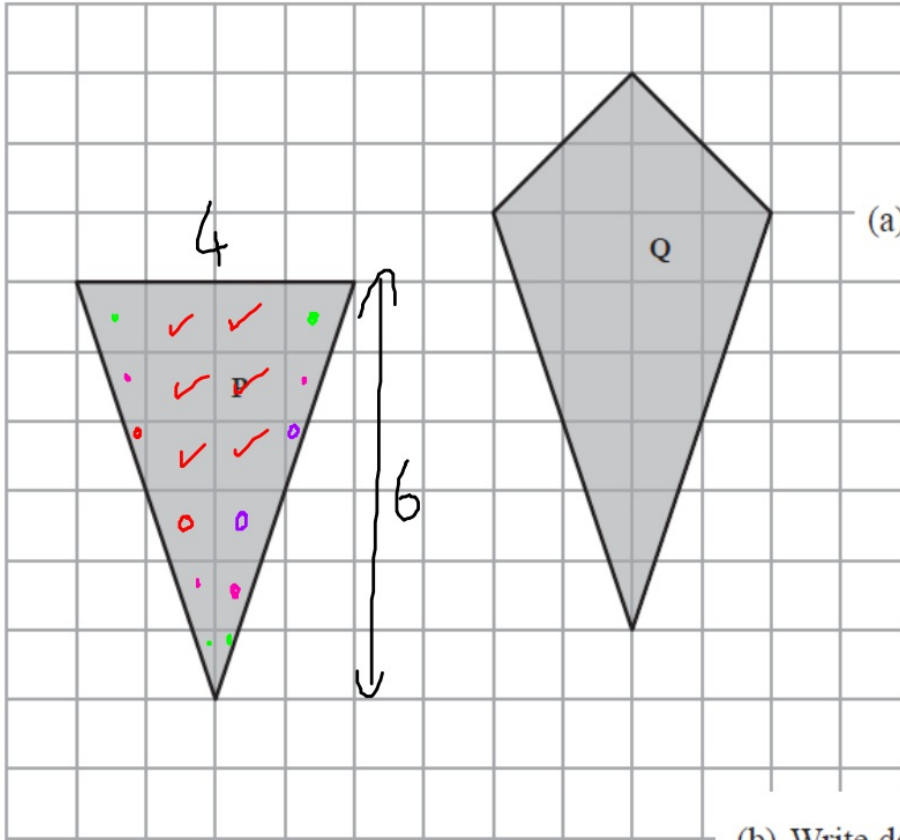
10 The diagram shows two shapes drawn on a centimetre grid.



(a) Find the area of shape P.

(b) Write down the mathematical name of quadrilateral Q.

10 The diagram shows two shapes drawn on a centimetre grid.



(a) Find the area of shape P.

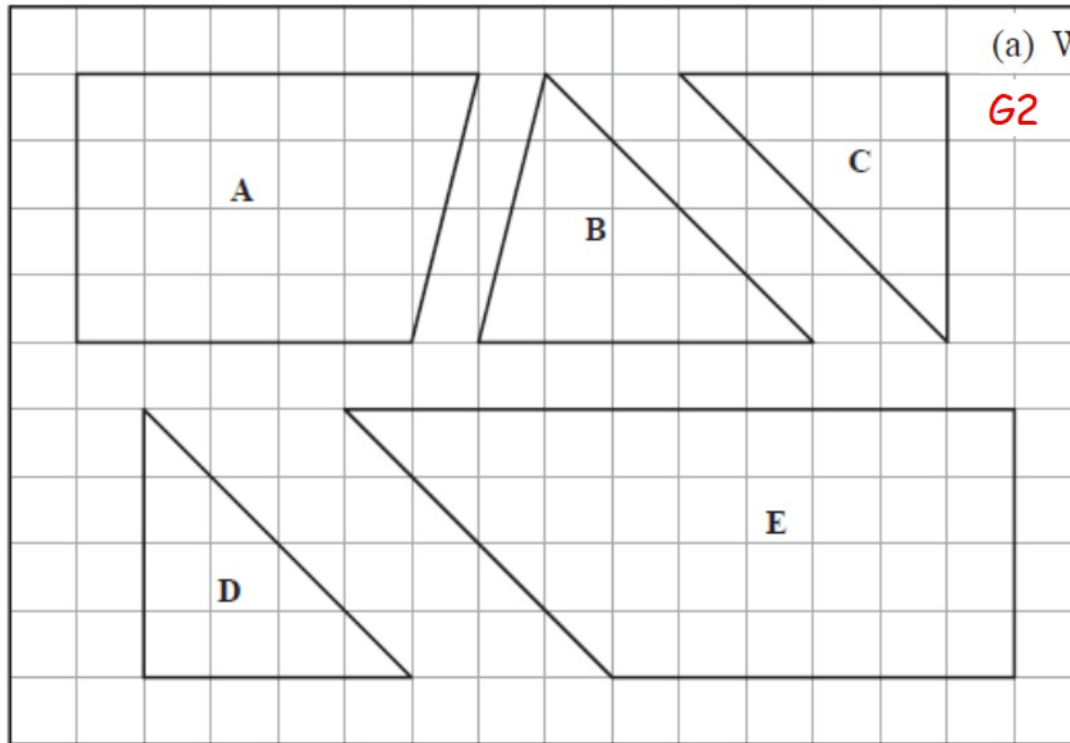
12cm²

$$\frac{B \times H}{2} \quad \frac{4 \times 6}{2} = 12\text{cm}^2$$

(b) Write down the mathematical name of quadrilateral Q.

kite

9 The diagram shows five shapes on a centimetre grid.



(a) Write down the name of shape E.

G2

.....
(1)

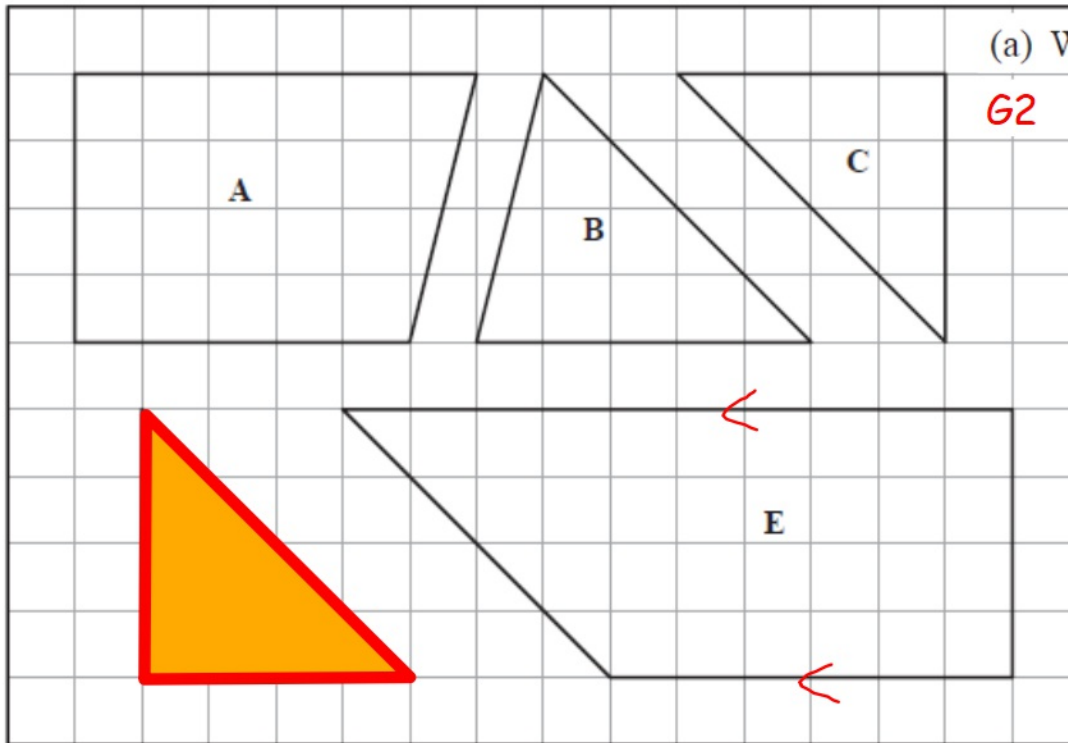
Two of the shapes are congruent.

(b) Write down the letters of these two shapes.

..... and
(1)

G49

9 The diagram shows five shapes on a centimetre grid.



(a) Write down the name of shape E.

G2

Trapezium
(1)

Two of the shapes are congruent. — identical

(b) Write down the letters of these two shapes.

G49

C and D
(1)

AQA

18

Here are five shapes, A to E.

Video created by W Neill

G2

P28

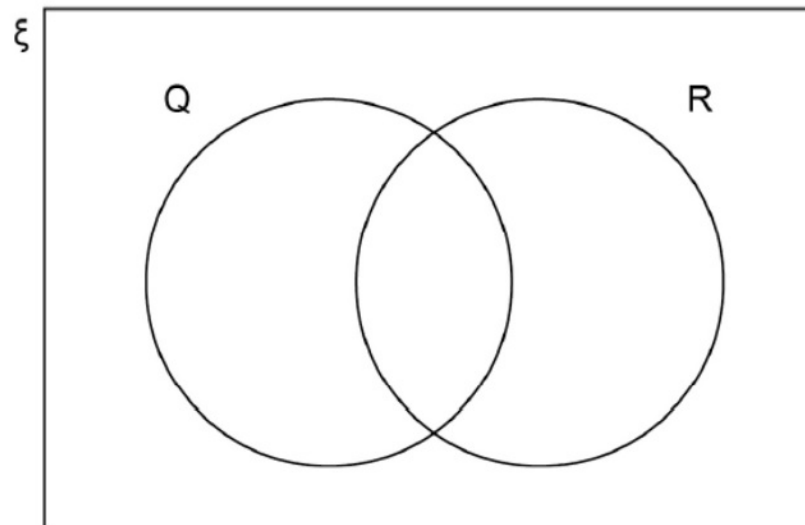
A	Parallelogram
B	Regular pentagon
C	Rhombus
D	Scalene triangle
E	Trapezium

In the Venn diagram,

ξ is the set of all shapes

Q is the set of quadrilaterals

R is the set of shapes which **always** have rotational symmetry.



Complete the Venn diagram with the letters A to E.

[3 marks]

18

Here are five shapes, A to E.

Video created by W Neill

G2

P28

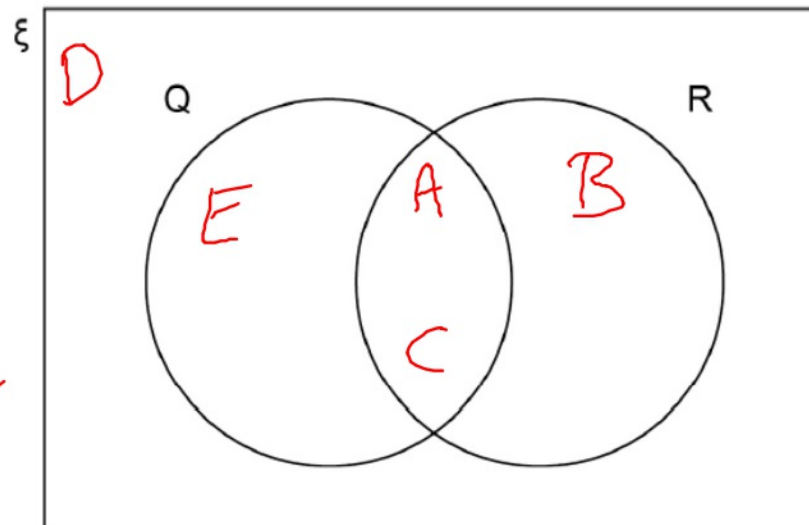
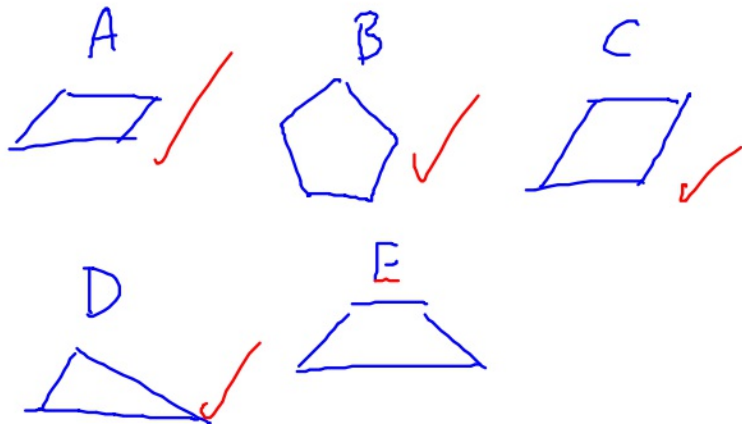
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A	Parallelogram
B	Regular pentagon
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E	Trapezium



Complete the Venn diagram with the letters A to E.

[3 marks]

13 Tick **all** the statements that are true for any rhombus.

[1 mark]

62

The diagonals are lines of symmetry

The diagonals bisect each other

The diagonals are perpendicular

The diagonals are equal in length

13 Tick **all** the statements that are true for any rhombus.

[1 mark]

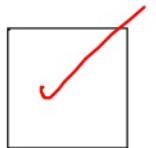
62



The diagonals are lines of symmetry



The diagonals bisect each other



The diagonals are perpendicular



The diagonals are equal in length

