Name:

Exam Style Questions

Tessellations

Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

Guidance

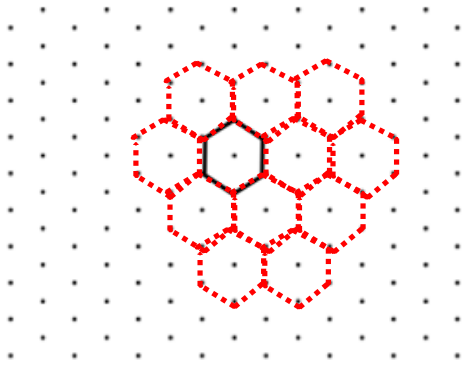
1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

www.corbettmaths.com/contents

Video 36

1. A regular hexagon is drawn below.



On the grid above, show how the hexagon tessellates.
You should draw at least 8 shapes.

(2)

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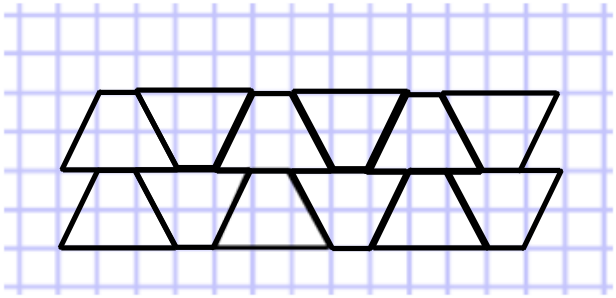
2. A quadrilateral is drawn below.



(a) What is the name of the quadrilateral?

trapezium

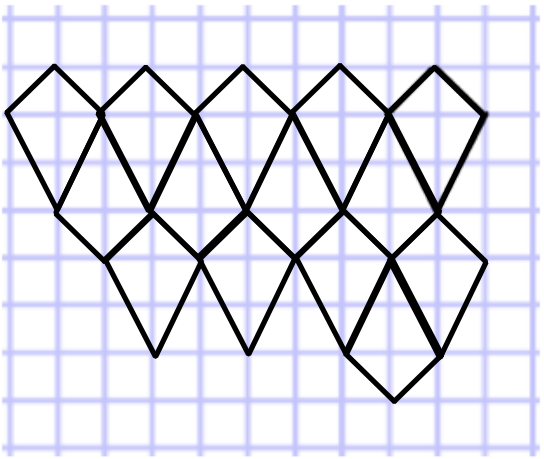
.....

(1)

(b) On the grid above, show how the quadrilateral tessellates.
You should draw at least 8 shapes.

(2)

3. A quadrilateral is drawn below.



(a) What is the name of the quadrilateral?

kite

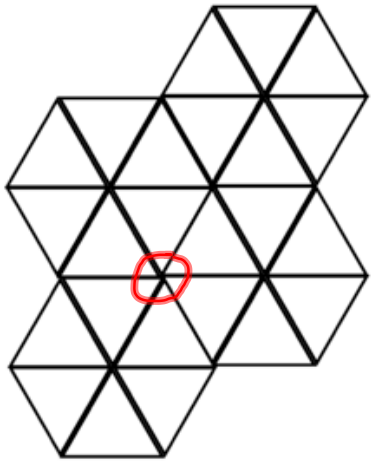
.....

(1)

(b) On the grid above, show how the quadrilateral tessellates.
You should draw at least 8 shapes.

(2)

4. Here is a tessellating pattern made from equilateral triangles.



(a) Write down the size of each interior angle in the equilateral triangle.

60 .....°

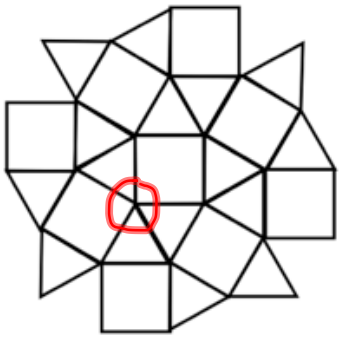
(1)

(b) Explain why equilateral triangles tessellate.

As each angle is 60°, six angles will fit together at each point to make 360°.

(2)

5. Here is a tessellating pattern made from equilateral triangles and squares.



(a) Write down the size of each interior angle in the equilateral triangle.

60 .....°

(1)

(b) Write down the size of each interior angle in the square.

90 .....°

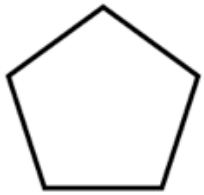
(1)

(b) Explain why equilateral triangles and squares tessellate can form a pattern that tessellates.

At each point, three triangles and two squares will fit perfectly together, as (3 x 60) + (2 x 90) = 360

(3)

6. Shown is a regular pentagon.



(a) What is the size of each interior angle?

540 ÷ 5 = 108

108 °

(2)

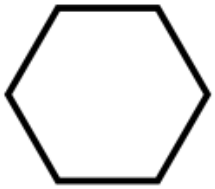
James says a tessellating pattern can be formed from using only regular pentagons.

Is he correct? Explain your answer.

As each interior angle is 108°, three regular pentagons at a point would be 324° and not leaving sufficient space for a fourth pentagon

(3)

7. Shown is a regular hexagon.



(a) What is the size of each interior angle?

720 ÷ 6 = 120°

120°

(2)

Emma says a tessellating pattern can be formed from using only regular hexagons.

Is he correct? Explain your answer.

Yes,
Three regular hexagons can fit together perfectly at each point as 3 x 120 = 360

(3)