Steady Steps Maths

FREE UNIT TEST · TOPIC 10

FREE SAMPLE · UNIT TEST A

Coordinate Plane & Shapes

Unit Test A · 40 marks · about 40 minutes

GRADE 5



Common Core 5.G.A.1–2, 5.OA.B.3, 5.G.B.3–4

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UNIT TEST A Coordinate Plane & Shapes

40 marks · about 40 minutes · Common Core 5.G.A.1–2, 5.OA.B.3, 5.G.B.3–4

Name _____ **Date** _____

Instructions

- Answer **every** question in the space given.
- Show your working: in Sections B and C you get marks for your method, even if the final answer is wrong.
- The number in brackets, like [2], shows how many marks a question is worth.
- You have about 40 minutes. A calculator is **not** needed.
- Check your answers if you finish early.

Your score

Section	Questions	Marks	Your score
A · Quick questions	1–10	10	
B · Show your working	11–16	17	
C · Problem solving	17–18	13	
Total		**40**	

Percentage: _____ % 85%+ excellent · 65–84% good · 45–64% keep practising · below 45% revise the packs first

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SECTION A Quick questions

1 mark each · write your answer in the box

1. Start at the origin. Go 4 units right and 3 units up. Write the ordered pair. [1]

Answer

2. Is the point (6, 0) on the x-axis or on the y-axis? [1]

Answer

3. How many units apart are (7, 0) and (7, 2)? [1]

Answer

4. Write the first five terms of the pattern “start at 0, add 9”. [1]

Answer

5. Both patterns start at 0. Pattern A adds 4; pattern B adds 8. Each term in B is how many times the matching term in A? [1]

Answer

6. Both patterns start at 0. x adds 2; y adds 3. Write the first three ordered pairs. [1]

Answer

7. Name the quadrilateral: 4 equal sides and 4 right angles. [1]

Answer

8. Always, sometimes or never? A parallelogram has 4 right angles. [1]

Answer

9. A triangle has sides of 6 cm, 6 cm and 7 cm. Name it by its sides. [1]

Answer

10. What do we call a triangle with one angle of more than 90°? [1]

Answer

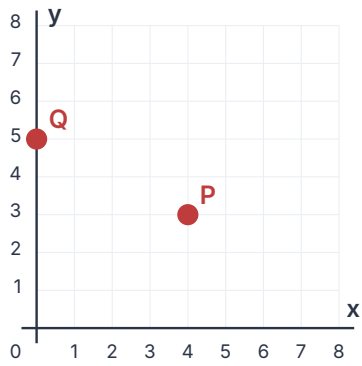
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SECTION B Show your working

Marks are given for your method

11 Write the coordinates of points P and Q. [2]



Answer

12 On a town map, the School is at (1, 3), the Library at (1, 7) and the Park at (6, 7). Walking only along grid lines: (a) how far is it from the School to the Library? (b) from the Library to the Park? (c) from the School to the Park, going past the Library? [3]

Answer

13 Pattern A: start at 0, add 4. Pattern B: start at 0, add 12. (a) Write the first five terms of each pattern. (b) How do the matching terms compare? [3]

Answer

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14 Rami plots (2, 1) by going up 2 units and then across 1 unit. [3]
(a) What has he done wrong? (b) Where does his point end up? (c) Describe the correct moves.

Answer

15 A rectangle has corners at (3, 3), (7, 3) and (7, 5). [2]
(a) Where is the fourth corner? (b) What is its perimeter in grid units?

Answer

16 Write always, sometimes or never, and give a reason. [4]
(a) A square is a rhombus. (b) A rectangle is a square.

Answer

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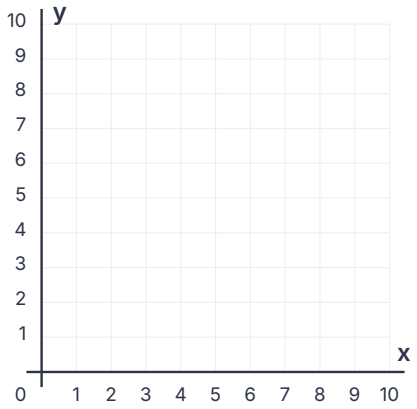
SECTION C Problem solving

Longer questions with several steps

17 Pattern x: start at 0, add 1. Pattern y: start at 0, add 2. [7]

(a) Write the first four ordered pairs (x, y). (b) Plot them on the grid and join them with a ruler.

(c) How does each y-coordinate compare with its x-coordinate? (d) If the pattern carries on, what is y when x is 8?



Answer

18 (a) Write every name from this list that fits a square: parallelogram, rectangle, rhombus, trapezoid, triangle. [6]

(b) A quadrilateral has 2 pairs of parallel sides and 4 equal sides, but no right angles. What is its most exact name?

(c) A triangle has sides of 8 cm, 9 cm and 13 cm, and its largest angle is 100°. Classify it by its sides and by its angles.

Answer

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Mark scheme

For parents · give the marks shown; method marks can be given even if the final answer is wrong

Tip: Give method marks generously when the working shows the right idea. If a mistake early on is carried through correctly, give the later marks.

Q	Answer	Marks	How to award the marks
1	(4, 3)	1	
2	x-axis	1	
3	2 units	1	
4	0, 9, 18, 27, 36	1	
5	2 times	1	
6	(0, 0), (2, 3), (4, 6)	1	
7	square	1	
8	Sometimes	1	
9	isosceles	1	
10	obtuse triangle	1	
11	P(4, 3), Q(0, 5)	2	1 mark each. Across (x) first, then up (y).
12	(a) 4 units (b) 5 units (c) 9 units	3	1 mark each part.
13	(a) A: 0, 4, 8, 12, 16; B: 0, 12, 24, 36, 48 (b) each term in B is 3 times the term in A	3	(a) 2 marks: 1 for each pattern. (b) 1 mark.
14	(a) He went up first; x (across) comes first. (b) (1, 2) (c) across 2, then up 1	3	1 mark each part.
15	(a) (3, 5) (b) 12 units	2	1 mark each part.
16	(a) Always: a square has 4 equal sides (b) Sometimes: only when all 4 sides are equal	4	For each part: 1 mark for the word, 1 mark for the reason.
17	(a) (0, 0), (1, 2), (2, 4), (3, 6) (b) points in a straight line (c) y is 2 times x (d) 16	7	(a) 2 marks (1 for 2–3 correct). (b) 2 marks: all points correct and joined. (c) 1 mark. (d) 2 marks: 1 for a correct method.
18	(a) parallelogram, rectangle, rhombus (b) rhombus (c) scalene, obtuse	6	(a) 2 marks (1 for two correct, no wrong ones). (b) 2 marks. (c) 2 marks: 1 for the sides, 1 for the angles.

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What to revise

Circle the questions your child lost marks on, then go back to the matching part of the pack

Questions	Skill	Revise in	✓ / ×
1, 11	Reading points	Pack 1 · The Coordinate Plane, Part 1	
2, 14	Plotting points	Pack 1 · The Coordinate Plane, Part 2	
3, 15	Distances along grid lines	Pack 1 · The Coordinate Plane, Part 3	
4	Patterns from a rule	Pack 2 · Patterns & Graphs, Part 1	
5	Comparing two patterns	Pack 2 · Patterns & Graphs, Part 2	
6	Ordered pairs	Pack 2 · Patterns & Graphs, Part 3	
7	Shapes from clues	Pack 3 · Classifying 2D Shapes, Part 2	
8, 16	Always, sometimes, never	Pack 3 · Classifying 2D Shapes, Part 3	
9, 10	Classifying triangles	Pack 3 · Classifying 2D Shapes, Part 4	
12	Maps and distances	Pack 1 · The Coordinate Plane, Parts 3 and 4	
13	Comparing two patterns	Pack 2 · Patterns & Graphs, Parts 1 and 2	
17	Patterns and graphs	Pack 2 · Patterns & Graphs, Parts 3 and 4	
18	Classifying shapes	Pack 3 · Classifying 2D Shapes, Parts 2, 3 and 4	

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