Steady Steps Maths

FREE UNIT TEST · TOPIC 11

FREE SAMPLE · UNIT TEST A

Lines, Shapes & Symmetry

Unit Test A · 40 marks · about 40 minutes

GRADE 4



Common Core 4.G.A.1–3

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Name _____ Date _____

UNIT TEST A Lines, Shapes & Symmetry

40 marks · about 40 minutes · Common Core 4.G.A.1–3

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. How many endpoints does a ray have? [1]

Answer

2. Two lines never meet, however far they go. What word describes them? [1]

Answer

3. How many right angles does a square have? [1]

Answer

4. A triangle has angles of 70°, 68° and 42°. Is it right, acute or obtuse? [1]

Answer

5. Pairs of parallel sides in a long rectangle? [1]

Answer

6. Which have a right angle? slanted parallelogram, right triangle, square, equal-sided triangle [1]

Answer

7. How many lines of symmetry does a long rectangle have? [1]

Answer

8. Is a line through the middles of two opposite sides of a square a line of symmetry? [1]

Answer

9. A figure starts at point G and goes on forever through point E. Name it. [1]

Answer

10. A corner is 5 squares to the right of a vertical line of symmetry. Where is the matching corner? [1]

Answer

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SECTION B Show your working

Marks are given for your method

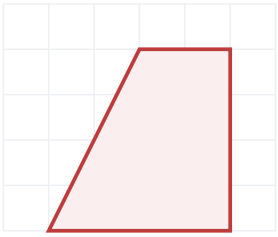
11 Use a ruler. [2]

(a) Draw ray WV. (b) Draw a line segment UY that is perpendicular to your ray.

Answer

12 Look at the 4-sided shape on the grid. [3]

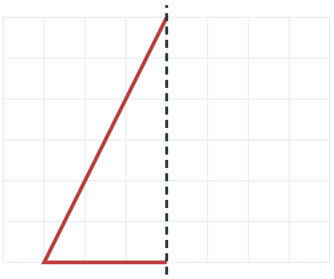
(a) How many pairs of parallel sides does it have? (b) How many right angles? (c) How many lines of symmetry?



Answer

13 The dashed line is a line of symmetry. [3]

(a) Draw the other half of the shape. (b) How many sides does the whole shape have? (c) How many right angles does the whole shape have?

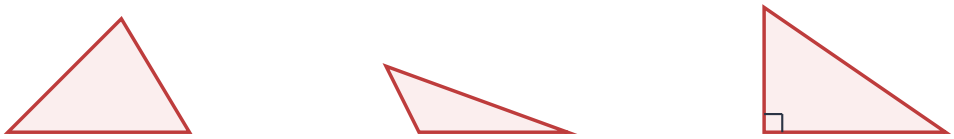


Answer

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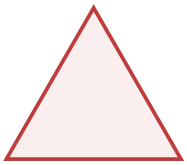
14 Write right, acute or obtuse for each triangle A, B and C. Right angles are marked with a small square. [3]



A B C

Answer

15 **You be the teacher.** Omar says an equal-sided triangle like this has 1 line of symmetry. [2]
(a) Is he right? (b) How many lines of symmetry does it have?



Answer

16 (a) Draw every line of symmetry of this shape with a ruler. (b) How many lines of symmetry are there? (c) How many of them are slanted? [4]



Answer

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SECTION C Problem solving

Longer questions with several steps

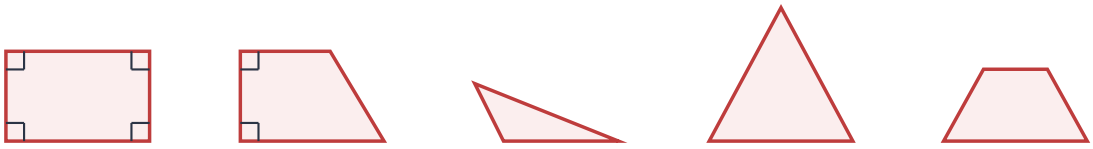
17 Use the shapes A to E. Right angles are marked with a small square. [7]

(a) Which shapes have at least one right angle?

(b) Which shapes have at least one pair of parallel sides?

(c) Which shapes have a right angle **and** a pair of parallel sides?

(d) Which shape is an obtuse triangle? (e) Which shapes have at least one line of symmetry?



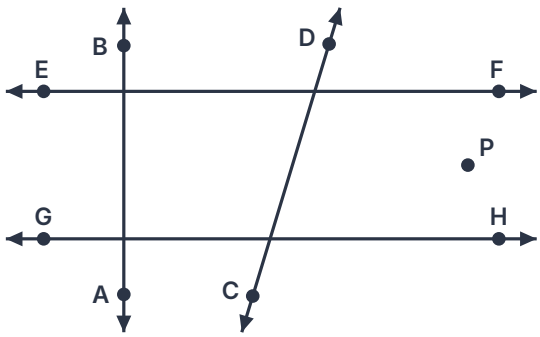
A B C D E

Answer

18 The map shows four straight roads, drawn as lines, and a well at point P. [6]

(a) Which line is parallel to line GH? (b) Which line is perpendicular to line GH?

(c) Line CD crosses line GH. Do they meet at a right angle? How can you check? (d) A new path goes through P, parallel to line GH. Draw it. Is it perpendicular to line AB?



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	1	1	
2	parallel	1	
3	4	1	
4	acute	1	
5	2	1	
6	right triangle, square	1	
7	2	1	
8	yes	1	
9	ray GE	1	
10	5 squares to the left of the line	1	
11	(a) dot at W, arrow beyond V (b) segment UY (dots at both ends) meeting the ray at a right angle	2	1 mark each part. (a) needs the endpoint at W; (b) needs a right angle (check with a page corner).
12	(a) 1 (b) 2 (c) 0	3	1 mark each part.
13	(a) mirror image drawn (b) 3 (c) 0	3	1 mark each part. Follow through from their drawing.
14	A: acute, B: obtuse, C: right	3	1 mark each.
15	(a) no (b) 3	2	1 mark each part.
16	(a) 2 lines drawn (b) 2 (c) 0	4	(a) 2 marks: all lines correct and none wrong (1 mark if one is missing). (b) 1 mark. (c) 1 mark.
17	(a) A, B (b) A, B, E (c) A, B (d) C (e) A, D, E	7	(a) 1. (b) 2 (1 if one is missing or extra). (c) 1. (d) 1. (e) 2 (1 if one is missing or extra).
18	(a) line EF (b) line AB (c) no; e.g. the corner of a page does not fit (d) path drawn; yes	6	(a) 1. (b) 1. (c) 2: 1 for no, 1 for a way to check. (d) 2: 1 for a parallel path through P, 1 for yes.

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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, 9	Lines, rays and segments	Pack 1 · Points, Lines & Rays, Part 1	
2	Parallel and perpendicular	Pack 1 · Points, Lines & Rays, Part 2	
3	Right angles in shapes	Pack 1 · Points, Lines & Rays, Part 3	
4, 14	Classifying triangles	Pack 2 · Classifying Shapes, Part 1	
5, 12	Parallel sides	Pack 2 · Classifying Shapes, Part 2	
6	Sorting shapes	Pack 2 · Classifying Shapes, Part 3	
7, 15	Counting lines of symmetry	Pack 3 · Line Symmetry, Part 2	
8	Is it a line of symmetry?	Pack 3 · Line Symmetry, Part 1	
10, 13	Completing a symmetric shape	Pack 3 · Line Symmetry, Part 3	
11	Drawing lines and rays	Pack 1 · Points, Lines & Rays, Part 4	
16	Drawing lines of symmetry	Pack 3 · Line Symmetry, Part 4	
17	Sorting shapes	Pack 2 · Classifying Shapes, Part 3 and Pack 3 · Line Symmetry, Part 2	
18	Parallel and perpendicular lines	Pack 1 · Points, Lines & Rays, Parts 2 and 4	

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