Steady Steps Maths

FREE UNIT TEST · TOPIC 11

FREE SAMPLE · UNIT TEST A

# Shapes & Equal Shares

Unit Test A · 40 marks · about 40 minutes

GRADE 2




Common Core 2.G.A.1–3

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Name _____ Date _____

UNIT TEST A

# Shapes & Equal Shares

40 marks · about 40 minutes · Common Core 2.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

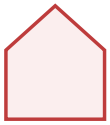
1 mark each · write your answer in the box

**1** How many sides does this shape have? [1]



Answer

**2** Name this shape: triangle, quadrilateral, pentagon or hexagon? [1]



Answer

**3** How many angles does a hexagon have? [1]

Answer

**4** How many faces does a cube have? [1]

Answer

**5** Which has more squares: 3 rows of 3, or 4 rows of 4? [1]

Answer

**6** A rectangle has 5 rows with 3 squares in each row. How many squares? [1]

Answer

**7** Are the parts equal or not equal? [1]



Answer

**8** What part is shaded? Write one half, one third or one fourth. [1]



Answer

**9** How many halves make one whole? [1]

Answer

**10** What is another name for one fourth? [1]

Answer


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## SECTION B Show your working

Marks are given for your method

**11** Draw a pentagon on the dots. How many angles does it have? [2]



Answer

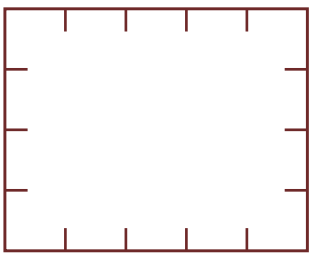
**12** (a) Which shapes are quadrilaterals? Write the letters. (b) Which shape is a triangle? [3]



A B C D E

Answer

**13** (a) Join the marks to split the rectangle into equal squares. (b) How many rows and how many columns? (c) How many squares? [3]



Answer


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**14** Split each shape: (a) the circle into halves (b) the rectangle into thirds (c) the square into fourths. [3]



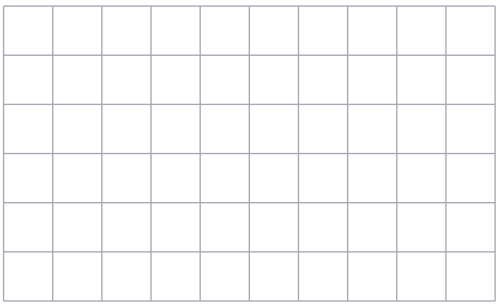
a b c

**15** Fares says this shape is split into thirds. Is Fares right? Explain. [2]



Answer

**16** (a) Draw a rectangle with 4 rows and 2 columns of squares on the grid. [4]
(b) Write an addition to find how many squares. (c) How many squares?



Answer


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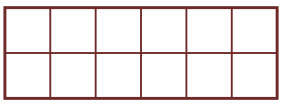
## SECTION C Problem solving

Longer questions with several steps

**17** A chocolate bar has 2 rows with 6 squares in each row. [7]

(a) How many squares are there? Show how you worked it out. (b) Adam eats one row. How many squares are left?

(c) Is the number left odd or even? (d) The whole bar is shared equally between 2 children (halves). How many squares does each child get?

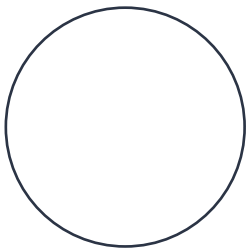


Answer

**18** Four friends share a round cake equally. [6]

(a) Draw lines to split the circle into 4 equal shares. (b) Shade one friend's share. What is it called?

(c) Two friends share another cake the same size equally. Who gets more: a friend who gets a half or a friend who gets a fourth? Explain.



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** | 6 | 1 | |
| **2** | pentagon | 1 | |
| **3** | 6 | 1 | |
| **4** | 6 | 1 | |
| **5** | 4 rows of 4 (16) | 1 | 9 and 16 squares. |
| **6** | 15 | 1 | |
| **7** | not equal | 1 | |
| **8** | one third | 1 | |
| **9** | 2 | 1 | |
| **10** | a quarter (one quarter) | 1 | |
| **11** | any closed 5-sided shape; 5 angles | 2 | 1 mark for a closed shape with 5 straight sides; 1 mark for 5 angles. |
| **12** | (a) A, C, E (b) B | 3 | (a) 2 (1 if one letter is missing or extra). (b) 1. |
| **13** | (a) lines drawn (b) 4 rows, 5 columns (c) 20 | 3 | 1 mark each part. |
| **14** | (a) 1 line through the middle (b) 3 equal strips (c) e.g. a plus sign or an X | 3 | 1 mark each; the parts need only look about equal. |
| **15** | No: the 3 parts are not equal. | 2 | 1 mark for “no”; 1 mark for the reason (thirds must be equal). |
| **16** | (a) 4 rows of 2 (b) 2 + 2 + 2 + 2 (c) 8 | 4 | (a) 2 marks: 1 for the right rows, 1 for the right columns. (b) 1 mark; adding the columns is fine too. (c) 1 mark. |
| **17** | (a) 6 + 6 = 12 (b) 12 − 6 = 6 (c) even (d) 6 (6 + 6 = 12) | 7 | (a) 2: method (rows or columns) + total. (b) 2. (c) 1. (d) 2: doubles fact or drawing + answer. Follow through. |
| **18** | (a) 2 lines crossing in the middle (b) one fourth (a quarter) (c) a half: fewer equal shares means bigger shares | 6 | (a) 2 (1 if the parts are clearly unequal). (b) 2: shading + name. (c) 2: “a half” + reason. |


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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, 3 | Sides and angles | Pack 1 · 2D & 3D Shapes, Part 1 | |
| 2, 12 | Name the shape | Pack 1 · 2D & 3D Shapes, Part 2 | |
| 4 | Cubes and faces | Pack 1 · 2D & 3D Shapes, Part 4 | |
| 5 | Rows, columns and squares | Pack 2 · Rows & Columns of Squares, Part 1 | |
| 6 | Add row by row | Pack 2 · Rows & Columns of Squares, Part 4 | |
| 7, 15 | Equal or not equal? | Pack 3 · Halves, Thirds & Fourths, Part 1 | |
| 8, 10 | Name the share | Pack 3 · Halves, Thirds & Fourths, Part 2 | |
| 9 | Shares and the whole | Pack 3 · Halves, Thirds & Fourths, Part 4 | |
| 11 | Draw shapes | Pack 1 · 2D & 3D Shapes, Part 3 | |
| 13 | Finish the lines | Pack 2 · Rows & Columns of Squares, Part 2 | |
| 14 | Split the shape | Pack 3 · Halves, Thirds & Fourths, Part 3 | |
| 16 | Draw rectangles | Pack 2 · Rows & Columns of Squares, Parts 3 and 4 | |
| 17 | Rows, columns and equal shares | Pack 2 · Rows & Columns of Squares, Part 4 and Pack 3 · Halves, Thirds & Fourths, Part 4 | |
| 18 | Halves, thirds and fourths | Pack 3 · Halves, Thirds & Fourths, Parts 2–4 | |


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