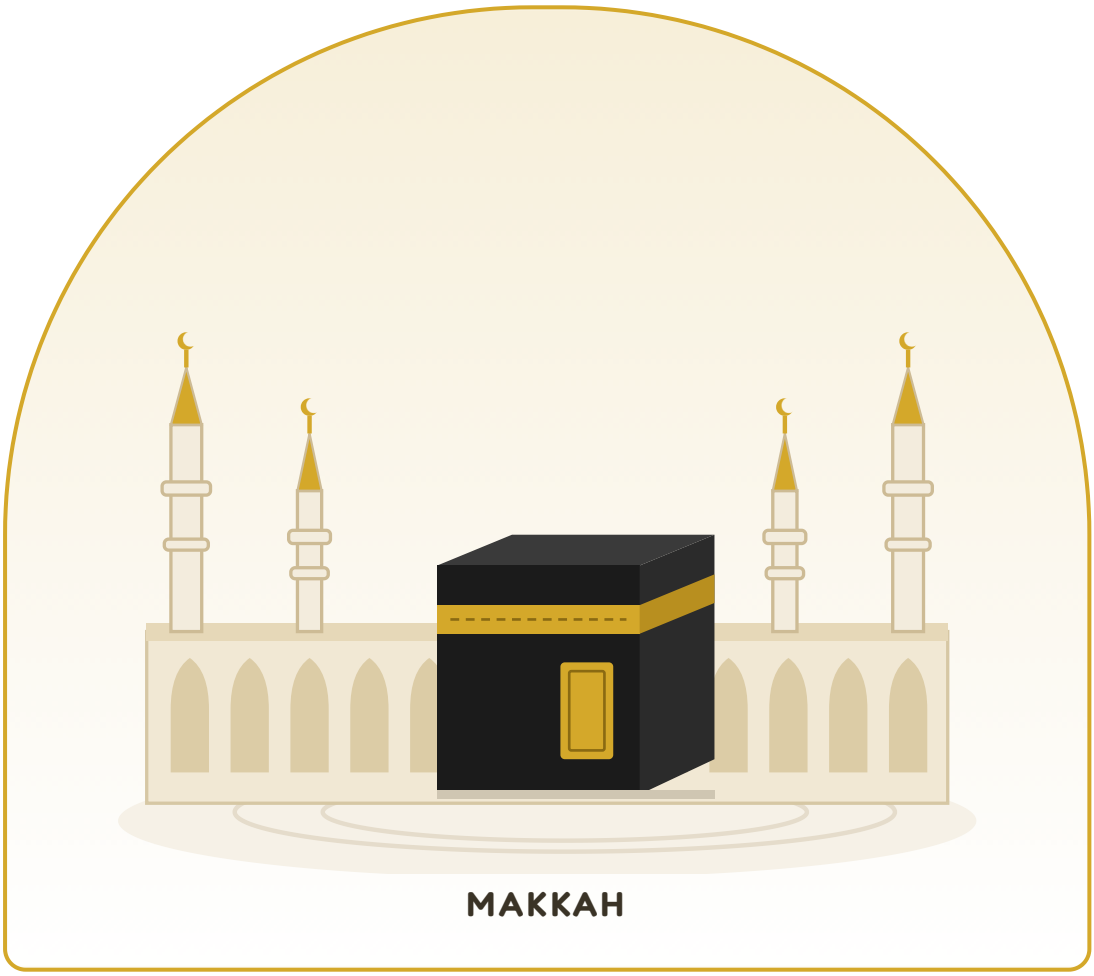
Adam's Maths

Learning, growing, alhamdulillah

Key Stage 2 · Ages 10–11

Year 6 • Term 1

SATs-style reasoning paper



MAKKAH

Name: _____

Reasoning paper · 40 minutes · 32 marks · Mirrors the Key Stage 2 SATs format



Assalamu alaikum! I'm Adam.

This is your Year 6, Term 1 **reasoning paper**. It is set out like the real Key Stage 2 SATs paper, so you can practise under test conditions.

- Say **Bismillah** and find a quiet place to work.
- You have **40 minutes**. There are **27 questions** worth **32 marks**.
- Write your answers in the boxes. If a question says 'show your method', you may get a mark for your working.
- If you get stuck, move on and come back later.

My score

_____ / 32

Score	Adam says...
27+ marks	Mashallah, outstanding!
22+ marks	Alhamdulillah, great work!
16+ marks	Good effort, keep going!
0+ marks	Keep practising, insha'Allah!

For grown-ups: The reasoning paper mirrors SATs Papers 2 and 3: problem solving and reasoning in 40 minutes. Questions are neutral and SATs-style. The mark scheme is on page 9. Print on A4 at 100% scale. More free resources at **adamsclassroom.co.uk**.

Reasoning paper

Term 1 · 40 minutes · 32 marks

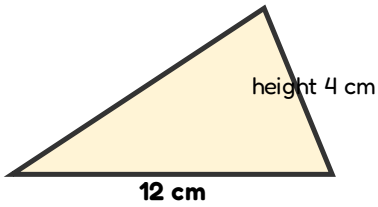
And establish weight in justice and do not make deficient the balance. Qur'an 55:9

1 A rectangle has an area of 27 cm^2. Its width is 3 cm.
What is its perimeter?

_____ cm

1 mark

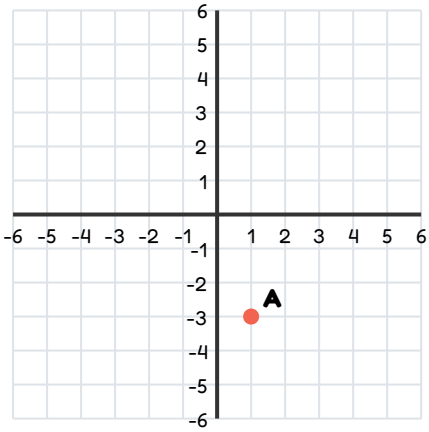
2 Calculate the area of this triangle.



_____ cm^2

1 mark

3 Point A is translated 3 squares left and 3 squares up.
What are the new coordinates of A?



(_____ , _____)

1 mark

4 120 children chose their favourite sport. The pie chart shows the results.



How many chose football? _____

How many chose tennis? _____

2 marks

Marks on this page: _____

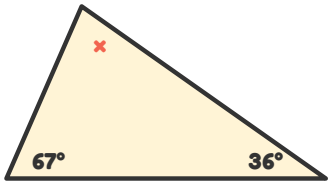
Alhamdulillah, that's excellent!

Reasoning paper

Term 1 · 40 minutes · 32 marks

And fulfil every promise. Indeed, the promise will be asked about. — Qur'an 17:34

5 Calculate the size of angle x. *Not drawn accurately.*



x = ☐°

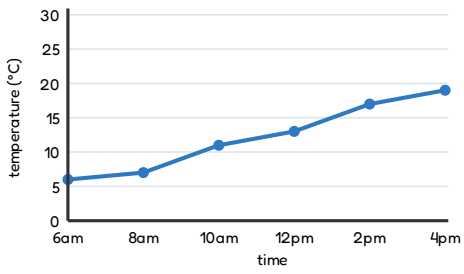
1 mark

6 Sam and a friend share 20 stickers in the ratio 3 : 1.
How many stickers does each person get?

☐ and ☐

2 marks

7 The graph shows the temperature during one day.



What was the temperature at 10am?

☐ °C

How much did it rise between 6am and 4pm?

☐ °C

2 marks

8 The radius of a circle is 29 cm. What is its diameter?

☐ cm

1 mark

9 Here is a sequence: **11, 17, 23, 29, ...**
What is the 20th term?

☐

1 mark

Marks on this page: ☐

Barakallahu feek!

Reasoning paper

Term 1 · 40 minutes · 32 marks

O you who believe, stand firm for justice. Qur'an 4:135

10 n + n + 5 = 23
What is the value of n?

n = ☐

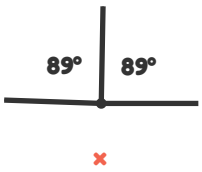
1 mark

11 A formula for the cost, in pounds, of hiring a bike is: **cost = 2h + 3**, where h is the number of hours.
What is the cost for 6 hours?

£ ☐

1 mark

12 Calculate the size of angle x. *Not drawn accurately.*



x = ☐ °

1 mark

13 To make purple paint, mix 2 pots of red with 5 pots of blue.
Sam uses 18 pots of red. How many pots of blue are needed?

☐

1 mark

14 A recipe for 4 people uses 200 g of flour.
How much flour is needed for 10 people?

☐ g

1 mark

Reasoning paper

Term 1 · 40 minutes · 32 marks

If you are grateful, I will surely increase you. — Qur'an 14:7

15 A school orders 31 boxes of pencils. Each box has 48 pencils. 153 pencils are given out.
How many pencils are left? *Show your method.*

2 marks

16 Zara buys a book for £7.27 and a game for £6.66.
How much change from £20?

£

1 mark

17 There are 66 children in a school choir. $\frac{5}{6}$ of them are girls.
How many boys are in the choir?

1 mark

18 A jacket costs £120. In a sale the price is reduced by 30%.
What is the sale price?

£

1 mark

19 At midnight the temperature was -6°C. By midday it was 12°C.
How many degrees did the temperature rise?

°C

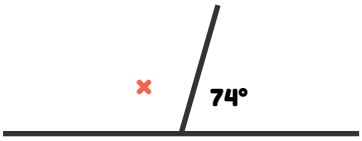
1 mark

Reasoning paper

Term 1 · 40 minutes · 32 marks

Believe in Allah and His Messenger and spend out of that in which He has made you successors. Qur'an 57:7

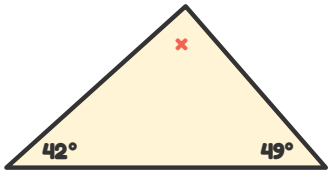
20 Calculate the size of angle x. *Not drawn accurately.*



x = ☐ °

1 mark

21 Calculate the size of angle x. *Not drawn accurately.*



x = ☐ °

1 mark

22 A cuboid is 7 cm long, 3 cm wide and 4 cm high.
What is its volume?

☐ cm^3

1 mark

23 Write a number between 1 and 50 that is a multiple of **4** and a multiple of **6**.

☐

1 mark

24 A school orders 37 boxes of pencils. Each box has 36 pencils. 270 pencils are given out.
How many pencils are left? *Show your method.*

☐

2 marks

Marks on this page: ☐

Mashallah, brilliant work!



Reasoning paper

Term 1 · 40 minutes · 32 marks

Those who spend in the way of Allah are like a seed which grows seven spikes; in each spike is a hundred grains. Qur'an 2:261

25 Chloe buys a book for £6.34 and a game for £4.48.
How much change from £20?

£ ____

1 mark

26 There are 72 children in a school choir. $\frac{6}{8}$ of them are girls.
How many boys are in the choir?

____

1 mark

27 A jacket costs £80. In a sale the price is reduced by 25%.
What is the sale price?

£ ____

1 mark



For grown-ups

Mark scheme

Total: 32 marks

Q	Answer	Marks
1	24 cm	1
2	24 cm^2	1
3	(-2, 0)	1
4	60; 15	2
5	77°	1
6	15 and 5	2
7	11°C; 13°C	2
8	58 cm	1
9	125	1
10	9	1
11	15	1
12	182°	1
13	45	1
14	500	1

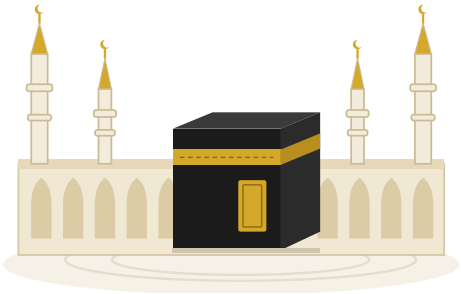
Q	Answer	Marks
15	1,335	2
16	6.07	1
17	11	1
18	84	1
19	18	1
20	106°	1
21	89°	1
22	84 cm^3	1
23	12, 24, 36, 48	1
24	1,062	2
25	9.18	1
26	18	1
27	60	1

For 2-mark questions, award 1 mark for a correct method or for one part correct. Accept equivalent answers (e.g. equivalent fractions or decimals).

Mashallah!

Maths Superstar





This is to say that

_____

has completed **Adam's Maths – Year 6, Term 1 Reasoning paper**.
Alhamdulillah for all your hard work! May Allah bless your learning.

_____ _____

Signed **Date**