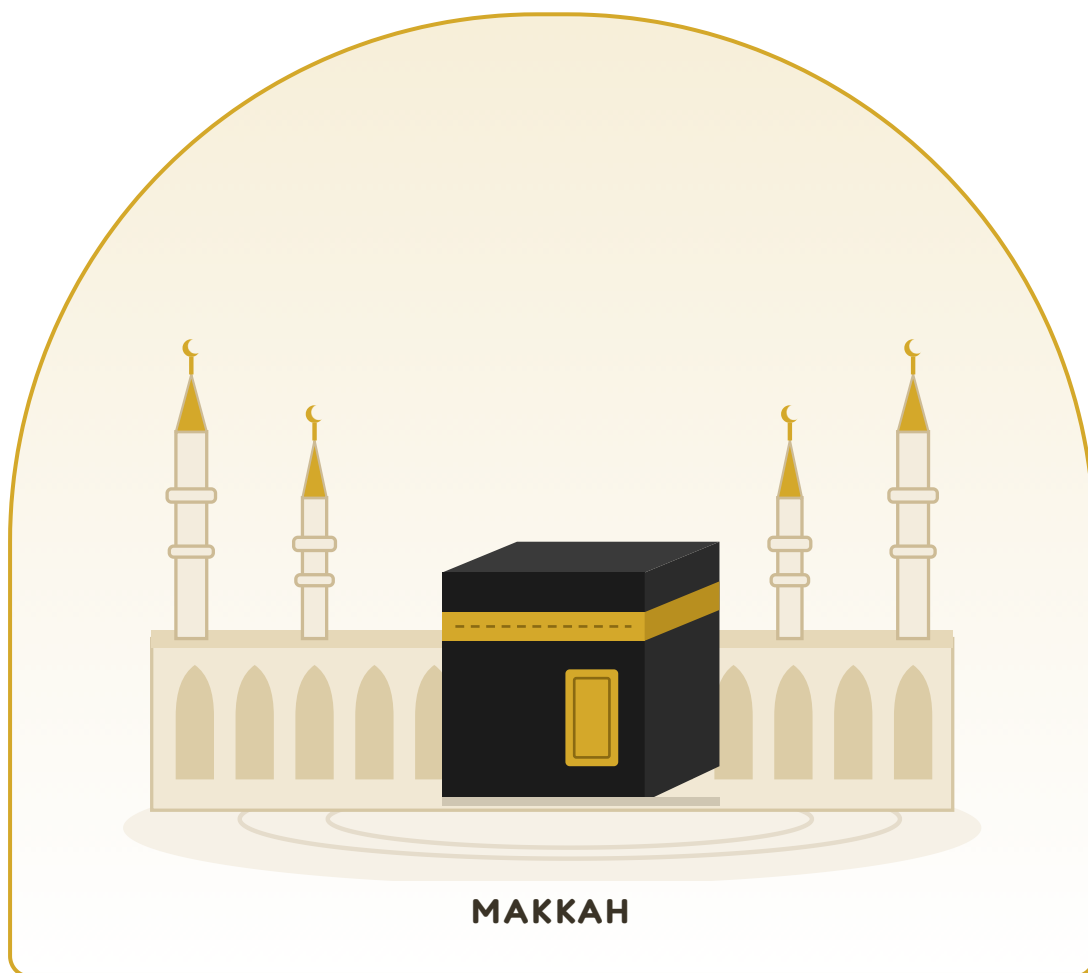




Year 6 • Term 1

SATs-style reasoning paper



Name: _____



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!

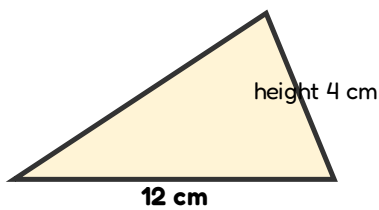
For grown-ups: The reasoning paper mirrors SATs Papers 2 and 3: problem solving and reasoning in 40 minutes. Questions are neutral and SATs-style. The mark scheme is on page 9. Print on A4 at 100% scale.

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

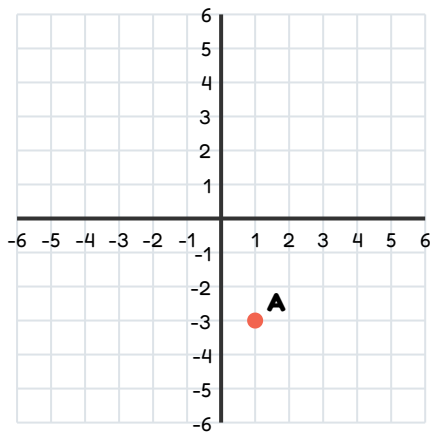
- 1 A rectangle has an area of 27 cm^2 . Its width is 3 cm.
What is its perimeter?

 cm
1 mark

- 2 Calculate the area of this triangle.

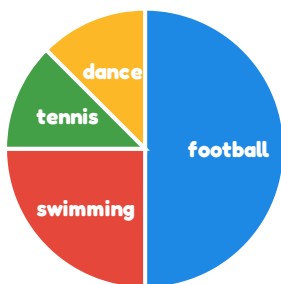
 cm^2
1 mark

- 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?

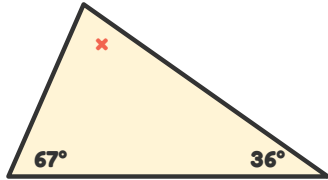
2 marks



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 = °

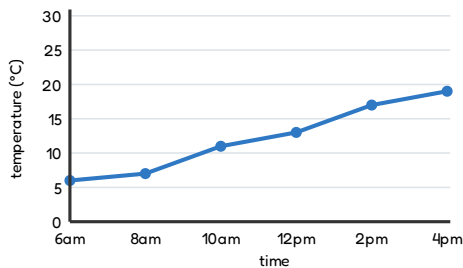
1 mark

- 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

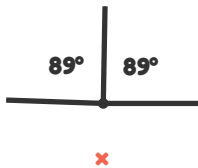
*O you who believe, stand firm for justice.*

Qur'an 4:135

10 $n + n + 5 = 23$

What is the value of n ? $n =$
1 mark11 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 mark12 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 mark14 A recipe for 4 people uses 200 g of flour.
How much flour is needed for 10 people? g
1 mark

*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?

$^{\circ}\text{C}$

1 mark



Believe in Allah and His Messenger and spend out of that in which He has made you successors.

Qur'an 57:7

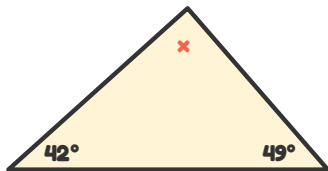
- 20 Calculate the size of angle x. *Not drawn accurately.*



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?

cm³

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



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

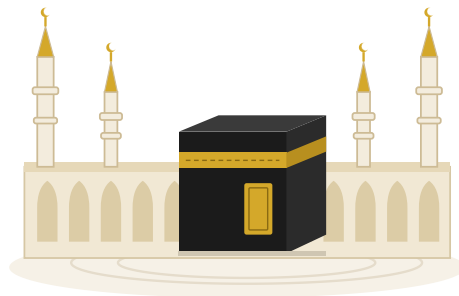
Q	Answer	Marks
1	24 cm	1
2	24 cm ²	1
3	(-2, 0)	1
4	60; 15	2
5	77°	1
6	15 and 5	2
7	11°C; 13°C	2
8	58 cm	1
9	125	1
10	9	1
11	15	1
12	182°	1
13	45	1
14	500	1

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