Entrance Exam

Sample

MATHEMATICS

35 minutes

Write your name using BLOCK CAPITALS *in the box below:*

Read this before you start,

Each of the questions in this paper is followed by four responses, **A, B, C** and **D**. For each question select the correct response and make a **firm** pencil mark **ACROSS** the appropriate letter on the answer sheet.

E.g. **30** [A] [B] [C] [D] If answer **B** is correct, mark it like this **30** [A] [~~B~~] [C] [D]

Do **not** put any marks in column E.

If you wish to change an answer be sure to **rub out** the pencil mark completely before marking another letter.

You are provided with an HB pencil, a rubber and an answer sheet.

DO ANY WORKING ON THE QUESTION PAPER IF REQUIRED

DO NOT START UNTIL YOU ARE TOLD

www.maths-a2z.co.uk

1. The temperature in Nuuk, the capital of Greenland, was only 3 degrees early one evening. A few hours later it was measured as -7 degrees. Which of the following statements is true?

A The temperature had decreased by 7 degrees.

B The temperature had decreased by 10 degrees.

C The temperature had increased by 10 degrees.

D The temperature had decreased by 9 degrees.

2. Which of these is the smallest number exactly divisible by 4, 6 and 8?

A 2

B 12

C 24

D 48

3. There are about 7500000 people living in Switzerland. In words this is

A Seventy-five million

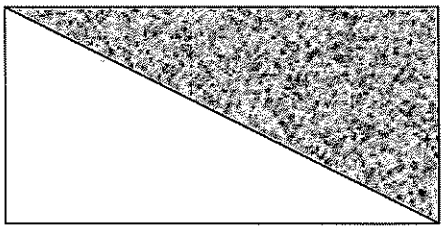
B Seventy-five thousand thousand

C Seven hundred and fifty thousand

D Seven and a half million

www.maths-a2z.co.uk

4. In the rectangle below, two opposite corners have been joined together. What is the area of the shaded region?



8 *cm*

14 *cm*

A 56 cm^2

B 44 cm^2

C 112 cm^2

D 98 cm^2

5. A minibus holds 14 passengers. A school trip will have 49 passengers. How many minibuses will they need?

A 3½

B 4

C 3

D 4½

6. Which of the following gives the smallest answer?

A $96 \div 2$

B $81 - 29$

C 34×1.5

D 7^2

www.maths-a2z.co.uk

7. Look at the number sentence below:

$$4 \times 14 - 8 = M \times 3 + 12$$

If M stands for a whole number, M must have a value of:

A 8

B 4

C 12

D 14

8. Which of the following numbers has a remainder of 3 when divided by 7 and a remainder of 5 when divided by 8?

A 40

B 66

C 45

D 29

9. Which of the following is $\frac{37}{6}$ written as a mixed number?

A 6 remainder 1

B 5 ⅙

C 6 ⅙

D 31 ⅙

www.maths-a2z.co.uk

10. In the space below calculate 15.43 + 112.2

Which is the correct answer?

A 127.45

B 127.6

C 127.63

D None of the above

11. There are 120 pupils at Jumpforjoy Junior School. Thirty five percent of them walk to school. How many pupils walk to school?

A 48

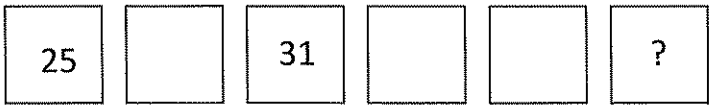
B 78

C 36

D 42

www.maths-a2z.co.uk

12. A number sequence has the same number added each time. The first number in the sequence is 25 and the third number is 31. What is the sixth number in the sequence?



A 37

B 40

C 34

D 41

13. Put these three measurements in order, with the smallest first and the largest last.

5½ cm , 5.7 cm , 56 mm

A 5½ cm , 56 mm , 5.7 cm

B 5½ cm , 5.7 cm , 56 mm

C 56 mm , 5½ cm , 5.7 cm

D 5.7 cm , 56 mm, 5½ cm

14. Jack tells his teacher that he has thought of a number, trebled it and then added nine. His answer was 63. What was the number Jack had thought of originally?

A 12

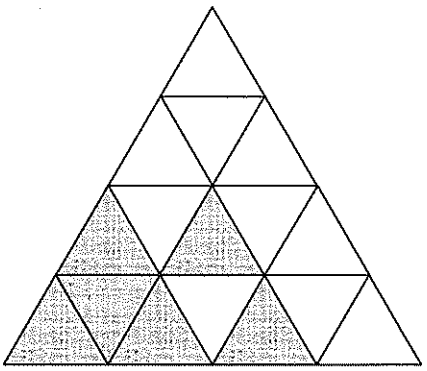
B 24

C 18

D 21

www.maths-a2z.co.uk

15. **The picture below is made from equilateral triangles. In its simplest terms what fraction of the picture is shaded?**



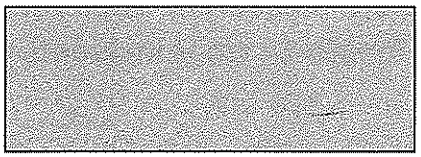
A $\frac{3}{8}$

B $\frac{10}{16}$

C $\frac{5}{8}$

D $\frac{6}{16}$

16. **Look at the rectangle below with a width of 4 *cm***



4 *cm*

If the area of the rectangle is 36 cm^2 then its perimeter is:

A **26 *cm***

B **9 *cm***

C **36 *cm***

D **13 *cm***

www.maths-a2z.co.uk

17. In this number grid each horizontal row and each vertical column adds to 52, but five squares are missing their numbers.

17		
	?	16
13	19	

Fill in the missing numbers in the square.

What number should be in the square with the question mark?

A 15

B 4

C 14

D 23

18. The lengths of five pencils are measured. Their mean (average) length is 8cm. If another pencil of length 14 cm is included, what is the mean length of all six pencils?

A 9 *cm*

B 11 *cm*

C 5.5 *cm*

D 8 *cm*

www.maths-a2z.co.uk

19. Three numbers A, B and C are as follows;

A is the size of each angle in an equilateral triangle

B is the size of each angle in a rectangle

C is the number of degrees in one complete turn

What is the value of C – B + A ?

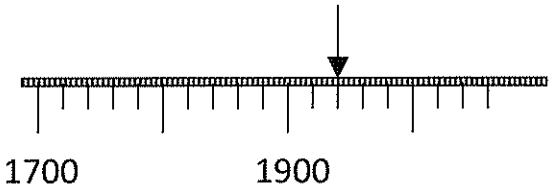
A 150 degrees

B 390 degrees

C 210 degrees

D 330 degrees

20. Part of a year line is shown below.



What year is the arrow pointing to?

A 1940

B 1920

C 1902

D 1904

www.maths-a2z.co.uk

Questions 21 – 26 are about money

21. Mr Potts has just been to the school summer fair and spent £11.60 on a tray of 40 little yellow plants. How much did each plant cost?

A 36p

B 29p

C 27p

D 32p

22. Tina and Saleha collect silver coins for charity. They collect one 50p coin, seven 20p coins, thirteen 10p coins and nine 5p coins. How much money did they collect altogether?

A £3.55

B £3.65

C £3.75

D None of the above

23. A bus has 12 children and 40 adults on it. Each adult has paid £4.50 and each child has paid £3. What will be the total paid by everyone on the bus?

A £174

B £180

C £196

D £216

www.maths-a2z.co.uk

24. In a sale, all items have one fifth taken off their normal price. How much is taken off the price of a watch which costs £85 normally?

A £16.00

B £17.00

C £76.50

D £68.00

25. Mrs Green went to the camping shop and bought a torch for £9.90, a packet of quick-cook meals for £9.60 and 2 chairs at £8.50 each. How much change should she receive if she paid with a £50 note?

A £4.50

B £14.50

C £13.50

D £36.50

26. A taxi journey costs £2 plus 40p for each mile travelled. The total cost of a journey of 63 miles would be:

A £25.20

B £27.20

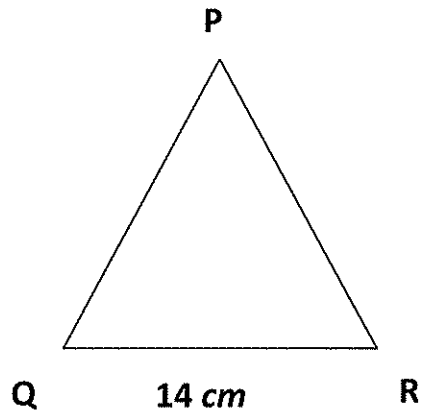
C £25.40

D £27.40

www.maths-a2z.co.uk

Questions 27 – 30 are about triangles

27. The diagram shows an isosceles triangle. If the perimeter of the triangle is 30 *cm* and side QR is 14 *cm*, one possible answer for the lengths of the other two sides is:



A 16 *cm* and 16 *cm*

B 14 *cm* and 7 *cm*

C 9 *cm* and 7 *cm*

D 8 *cm* and 8 *cm*

28. The perimeter of an equilateral triangle is 22.8 cm. What is the length of one of its sides?

A 7.6 cm

B 68.4 cm

C 7.9 cm

D 6.8 cm

www.maths-a2z.co.uk

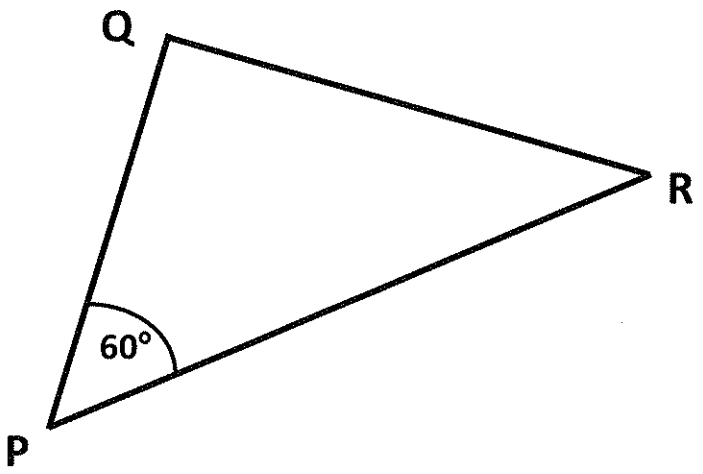
29. In this triangle, the angle at Q is twice as big as the angle at R. What is the size of the angle at Q?

A 180°

B 80°

C 60°

D 40°



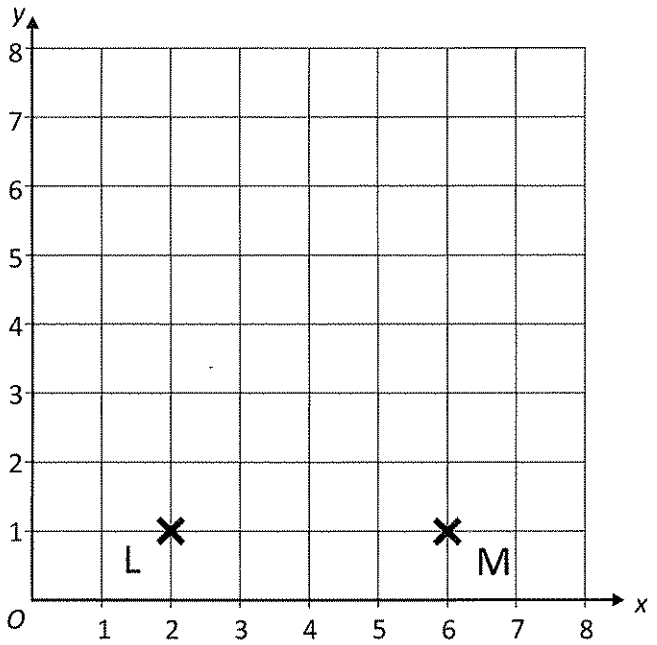
30. The diagram shows two points L and M. A third point N has to be added such that joining L, M and N with straight lines will make an isosceles triangle. Which could be the co-ordinates of point N?

A (5, 2)

B (2, 4)

C (6, 4)

D (4, 5)



www.maths-a2z.co.uk

Questions 31 to 35 are about a group of pupils on a day out

31. For lunch each person has three sandwiches, two chocolate bars and one apple. If the group has forty-two sandwiches in total, how many chocolate bars will they have?

A 26

B 14

C 28

D 39

32. The group needs lots of five pence coins for a game. Each five pence coin has a diameter of 18 *mm* and their coins add up to seventy-five pence. If they lined them all up along a straight edge, how long would the complete line of coins be?



A 135 *cm*

B 45 *cm*

C 9 *cm*

D 27 *cm*

33. To return from their day out they must catch the bus that leaves at 19 : 47 and takes one hour forty-five minutes. What time does the bus arrive?

A 20 : 92

B 21 : 32

C 20 : 47

D 20 : 32

www.maths-a2z.co.uk

34. After the day out it was discovered that only four sevenths of the 42 sandwiches had been eaten. How many sandwiches had been eaten?

A 24

B 25

C 26

D 28

35. The group measure the total distance they have walked in the day to be 10 km. To change this into miles, divide the distance by 8 and then multiply the result by 5. The total distance in miles would be

A 5 miles

B 15 miles

C 6.25 miles

D 6 miles

www.maths-a2z.co.uk