11 +

MATHEMATICS SAMPLE QUESTIONS

Multiple Choice

Please read the following instructions carefully:

- Do not begin the test or open this booklet until you are advised to do so.
- This test has 32 questions and you will have 30 minutes to complete it.
- Work as quickly and as accurately as possible.
- Answers should only be marked on the answer sheet provided.
- All working out should be done on a separate sheet of paper.
- If you need to change an answer, rub out your answer completely and mark the new answer clearly.
- If you are unable to answer a question, select the most appropriate answer on the answer sheet.
- If you finish before time, check your answers.

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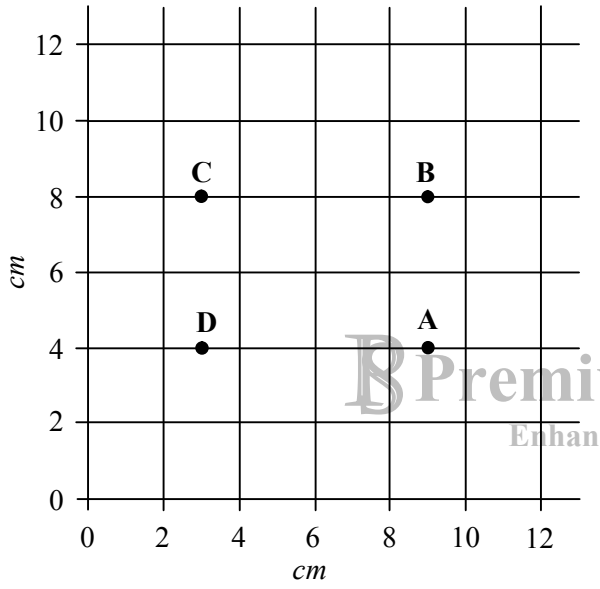
Q **1**

Find 67845 rounded to the nearest hundred.

A 67900
B 67000
C 70000
D 67800
E 67850

Q **2**

There are four points A, B, C and D on the grid that form a rectangle.
Find the perimeter of the rectangle.



A 10 cm
B 14 cm
C 24 cm
D 20 cm
E 12 cm

PLEASE CONTINUE

Q **3**

The months of the year are written on cards and placed in a bag. What is the probability that a card chosen at random begins with the letter J?

A $^1/_6$
B $^1/_3$
C $^1/_4$
D $^1/_2$
E $^1/_5$

Q **4**

Mr Chan's car fuel tank contains 45 litres of petrol. His car does 35 miles per gallon.
If 1 gallon is equal to 4.5 litres, how much distance can his car cover with this amount of fuel?

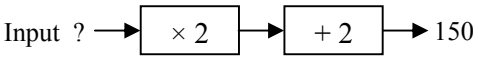
A 375
B 265
C 350
D 250
E 455

PLEASE CONTINUE

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Q **5**

Look at the following flow diagram.



What is the input?

A 138
B 75
C 84
D 74
E 69

Q **6**

63 computers are shared among Year 3, 4 and 5 in the ratio 2:3:4.
How many computers does Year 4 have?

A 28
B 18
C 24
D 21
E 35

Q **7**

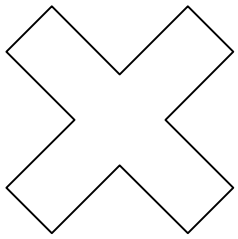
One day 20% children were absent from school. If there are 365 children altogether, how many children were absent from school?

A 91
B 75
C 73
D 78
E 8

PLEASE CONTINUE

Q **8**

How many lines of symmetry has the shape below?



A 0
B 1
C 3
D 4
E 2

Q **9**

The local town is building an indoors shopping centre. There are 28 shop units in the centre. Each shop floor has the same dimensions with length X metres and width Y metres.
What is the total area of shop floor?

A $28 + X + Y$
B $28XY$
C $28X + Y$
D $28(X + Y)$
E $28Y + X$

PLEASE CONTINUE

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Q **10**

The temperature in Moscow at noon was -11˚C. If the temperature falls by 3 degrees in the afternoon, what is the new temperature?

A -8˚C
B 8˚C
C 14˚C
D 3˚C
E -14˚C

Q **11**

The tally chart displays how many pupils were absent from school during the week.

School day	*Pupils absent*
Mon	𝍸 |
Tue	||||
Wed	𝍸 |
Thu	𝍸 ||
Fri	?

If the average is 5, what number does the question mark represent?

A 2
B 8
C 3
D 6
E 5

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PLEASE CONTINUE

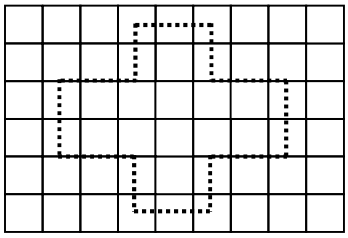
Q **12**

Carlos is planning his journey from London to Liverpool. The distance from London to Liverpool is 225 miles. His average speed is 50 miles per hour.
What time will he reach Liverpool if he leaves London at 9.00am?

A 1.30am
B 12.30pm
C 1.30pm
D 1.00pm
E 2.30pm

Q **13**

Find the total area of the dotted shape below.



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A 17 cm^2
B 14 cm^2
C 18 cm^2
D 16 cm^2
E 12 cm^2

PLEASE CONTINUE

Q **14**

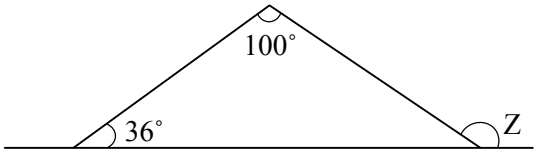
Find the missing number.

8 5 10 7 12 ? 14 11

A 11
B 8
C 10
D 9
E 12

Q **15**

Find angle Z.



A 34˚
B 70˚
C 146˚
D 74˚
E 136˚

Q **16**

$-8 < x < 3$

Which option is correct?

A 3
B 7
C -4
D -9
E 4

PLEASE CONTINUE

Q **17**

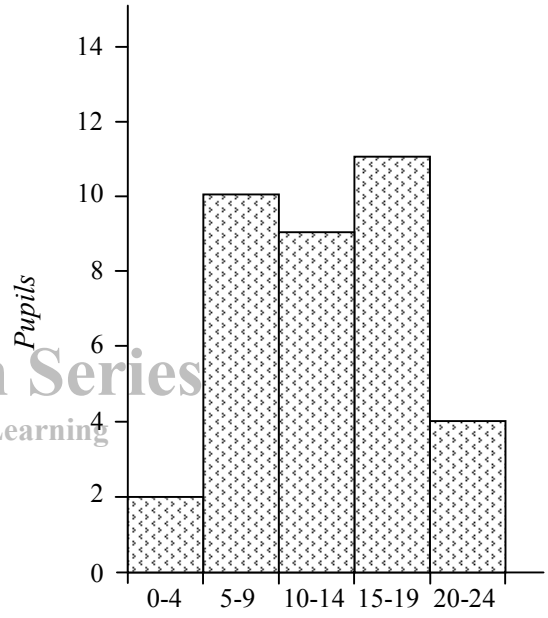
Richard has a bag of 12 split lollies.2 lollies are banana flavoured, 3 are pineapple, 4 are strawberry and the rest are blackcurrant flavoured.
What is the probability that Richard will pick up a blackcurrant flavoured lolly from the bag?

A $^1/_6$
B $^1/_4$
C $^1/_5$
D $^2/_{10}$
E $^1/_3$

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Q **18**

The chart below displays the time taken for year 6 pupils travelling to school.



Find the number of pupils with travel time of less than 20 minutes?

A 36
B 21
C 30
D 28
E 32

PLEASE CONTINUE

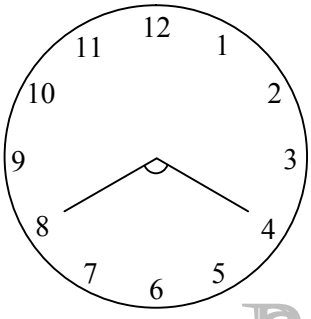
Q **19**

The New Airways fly to 33 destinations. All their destinations are either in Europe or North America. They have 9 more destinations in Europe than in North America.
How many destinations do they have in North America?

A 11
B 14
C 12
D 15
E 10

Q **20**

What is the size of the small angle between the hours 4 and 8?



A 150˚
B 130˚
C 120˚
D 90˚
E 100˚

PLEASE CONTINUE

Q **21**

The sum of 3 numbers is 42.
The middle number is double the smaller number and half the larger number.
What is the smaller number?

A 5
B 8
C 7
D 6
E 9

Q **22**

Anna is making a chocolate cake. Recipe for cake is mixed using 35 g of cocoa to 245 g of sugar. If Anna uses 280 g of cocoa, how many grams of sugar will she need?

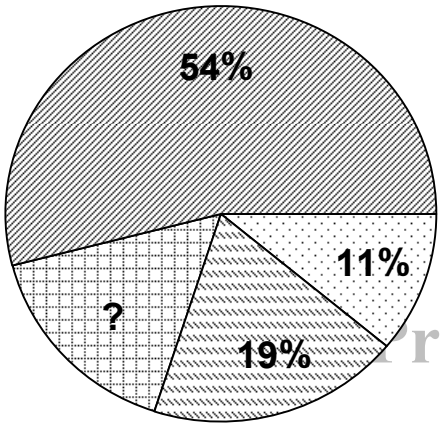
A 1960 g
B 1470 g
C 1880 g
D 2020 g
E 1750

PLEASE CONTINUE

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Q **23**

The chart below displays the distribution of eye colour in a school.



Brown Green

Grey Blue

If there are 1500 pupils in the school, how many of them have grey eyes?

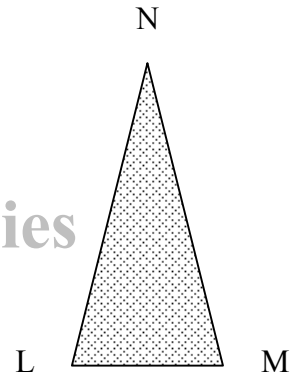
A 225
B 310
C 215
D 240
E 255

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PLEASE CONTINUE

Q **24**

The triangle LMN is isosceles and has a perimeter of 56 cm. Sides LN and MN are 3 times the length of side LM.
What is the length of side LM?



A 7 cm
B 21 cm
C 8 cm
D 24 cm
E 9 cm

Q **25**

The number of employees at Fast office are 640. 240 of the employees have access to a computer workstation. What fraction of the employees have access to a computer?

A $^{1}/_{4}$
B $^{3}/_{5}$
C $^{1}/_{8}$
D $^{3}/_{8}$
E $^{3}/_{7}$

PLEASE CONTINUE

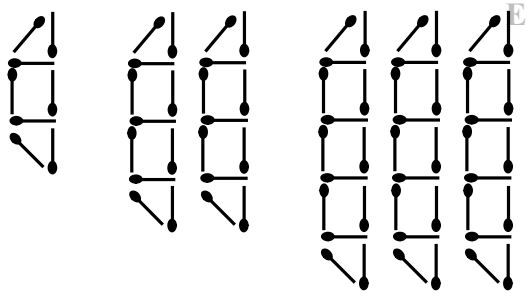
Q **26**

What is $8^2 + 4^3$?

A 128
B 125
C 28
D 8243
E 62

Q **27**

Sajid is making a pattern using matches.
The first 3 patterns are shown below.



Find the number of matches that Sajid will use in the next pattern.

A 62
B 64
C 56
D 68
E 86

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PLEASE CONTINUE

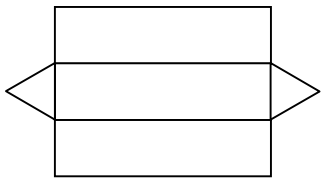
Q **28**

Mr Smith spends £7.30 at the minimarket.
He buys a newspaper, sandwiches, 2 kg of apples and 1.5 kg of cherries.
If the newspaper costs 80p, sandwiches £1.40 and cherries £3.30, how much does 1 kg of apples cost?

A £1.80
B £1.60
C £0.90
D £0.80
E £1.00

Q **29**

This net can be folded to make a triangular prism.



How many vertices does the prism have?

A 8
B 5
C 4
D 7
E 6

Q **30**

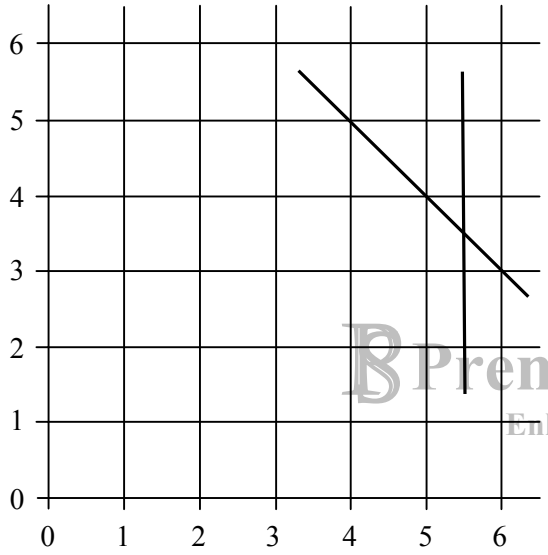
Choose the shape with no line of symmetry.

A Regular hexagon
B Kite
C Parallelogram
D Square
E Equilateral triangle

PLEASE CONTINUE

Q **31**

The graph below displays two lines.



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Find the point of intersection.

A (6 , 4)
B (5.5 , 3.5)
C (4 , 6)
D (3.5 , 5.5)
E (3 , 6)

Q **32**

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The table below displays the number of electronic toys tested by 5 engineers over a 3 month period.

	Cars	*Dolls*	*Phones*
March	1365	979	865
April	1230	1345	1140
May	1250	1225	1235

How many more cars were tested than phones over the 2 month period in April and May?

A 150
B 95
C 116
D 115
E 105

END OF TEST

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Name: **Date of Birth:**

1	2	3	4	5	6	7	8	9	10
A	A	A	A	A	A	A	A	A	A
B	B	B	B	B	B	B	B	B	B
C	C	C	C	C	C	C	C	C	C
D	D	D	D	D	D	D	D	D	D
E	E	E	E	E	E	E	E	E	E

11	12	13	14	15	16	17	18	19	20
A	A	A	A	A	A	A	A	A	A
B	B	B	B	B	B	B	B	B	B
C	C	C	C	C	C	C	C	C	C
D	D	D	D	D	D	D	D	D	D
E	E	E	E	E	E	E	E	E	E

21	22	23	24	25	26	27	28	29	30
A	A	A	A	A	A	A	A	A	A
B	B	B	B	B	B	B	B	B	B
C	C	C	C	C	C	C	C	C	C
D	D	D	D	D	D	D	D	D	D
E	E	E	E	E	E	E	E	E	E

31	32
A	A
B	B
C	C
D	D
E	E

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Guidance for Parents

Premium Series Practice Papers

Premium Series practice papers have been produced to provide children practice for their actual secondary school selection examinations.
The style of the practice papers is as close to the actual examination as possible. We have tried to cover a wide range of question types that can possibly appear in secondary school selection examinations.
This sample contains 32 questions.

Administrating the Practice Test

It is important to create an environment as close to the real examination as possible. Your child should be comfortable and in a quiet well-lit area where they are unlikely to be disturbed during the test.
Prior to the test, go through the instructions with your child to ensure that they understand what is required of them. Work through the examples together so that your child fully understands what each question is asking them to do.
Remind the child not to spend too much time over one question. Explain that some questions they might find difficult and it is better to attempt more questions rather than spending too much time over one question.

Once the child has completed a question they must select one of the five possible answers on the answer sheet. A horizontal line should be drawn in the appropriate box using a pencil. Any mistakes should be erased completely before the correct answer is marked.
Allow your child 30 minutes to complete the test. Do not start timing until they have read the instructions.
If the child has not completed the test within 30 minutes, make a note of the last question your child has answered. After this allow your child to complete the test.

Marking

The answers are given on the other side of this sheet. Give one mark for each question your child has answered correctly. Convert the results into a percentage. The score your child obtains on these tests is not necessarily the score your child will obtain in the actual examination. Generally a score of at least 85% is required on these test papers to indicate possible success.
You can help your child to improve their score by covering the techniques required in areas where your child is weak. Also the child can significantly improve their speed by doing more practice papers. Remember that regular practice will reinforce learning and also increase speed.

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Answers Mathematics Sample Questions

Sample Questions

1. D	**2.** D	**3.** C	**4.** C	**5.** D
6. D	**7.** C	**8.** D	**9.** B	**10.** E
11. A	**12.** C	**13.** C	**14.** D	**15.** E
16. C	**17.** B	**18.** E	**19.** C	**20.** C
21. D	**22.** A	**23.** D	**24.** C	**25.** D
26. A	**27.** D	**28.** C	**29.** E	**30.** C
31. B	**32.** E			