



**Year 7 (11+) Entrance and Scholarship
Examination**

Sample Paper

Maths

Name:

Time: 45 minutes

Instructions:

Section A contains 20 multiple-choice questions.

Answer each question by drawing a circle around the correct answer like this:

A	B	C	D
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Use the space on the paper for working out.

Section B contains 5 problem-solving questions.

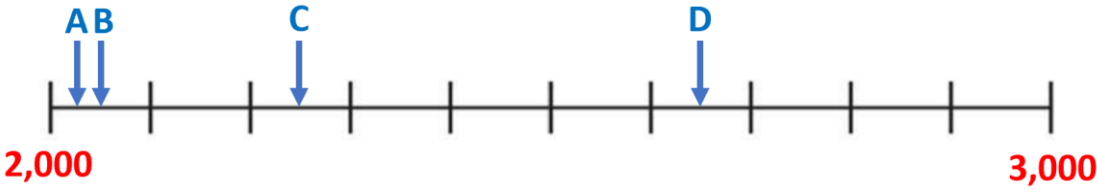
Attempt all questions and use the space on the paper to clearly show your working out. There is a space at the bottom of each question for you to write your final answer.

You may not use a calculator. Rulers are permitted, but any **other measuring devices (e.g. protractors) are not allowed.** All diagrams are not drawn to scale, so it will not help you to measure them yourself as part of your workings.



Section A : Multiple Choice Questions

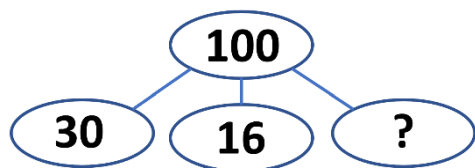
1.	<i>What is $2026 + 2026$?</i>			
	(A) 2052	(B) 4026	(C) 4052	(D) 4252

2.	<i>Which of these arrows is showing where 2026 would be on this number line?</i>						
	 <p>The number line starts at 2,000 and ends at 3,000. There are 10 major tick marks between 2,000 and 3,000, representing intervals of 200 units. Arrows A and B point to the first tick mark after 2,000 (220). Arrow C points to the first tick mark after 2,000 (220). Arrow D points to the first tick mark after 2,000 (220).</p>						
A		B		C		D	

3.	<i>To the nearest hour, how long is 2026 minutes?</i>			
	(A) 3 hours	(B) 30 hours	(C) 33 hours	(D) 34 hours



4.



What number bonds with **30** and **16** to make **100**?

(A) 44

(B) 46

(C) 54

(D) 56

5.

$$50 \times 14 < \boxed{} < 1000 - 199$$

Which of these numbers could fit into the empty box to make this inequality correct?

(A) 555

(B) 666

(C) 777

(D) 888

6.

Which of these numbers has the same number of factors as the number **81**?

(A) 12

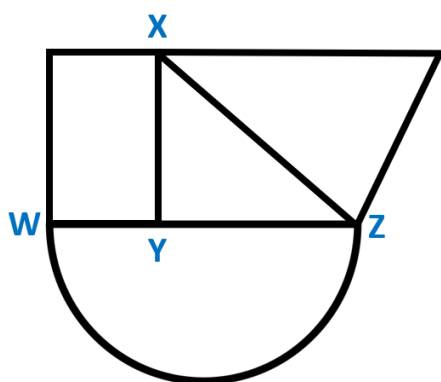
(B) 16

(C) 24

(D) 64



7.



It is possible to draw this shape without taking your pencil off the page, and without going over any single line twice.

If your pencil begins drawing the shape at point W, where would it be once the shape is complete?

(A) X or Y

(B) Y or Z

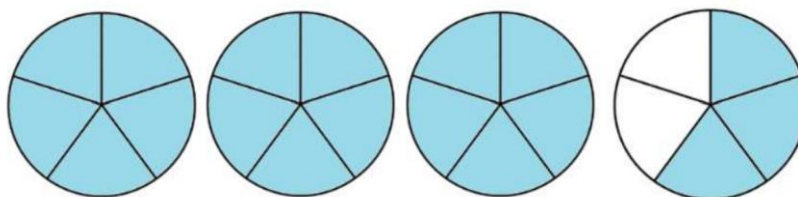
(C) X only

(D) Y only

8.

What is **half of $3 \frac{3}{5}$** ?

Use the diagram below to help you.



(A) $1 \frac{3}{10}$

(B) $1 \frac{1}{2}$

(C) $1 \frac{4}{5}$

(D) $1 \frac{9}{10}$



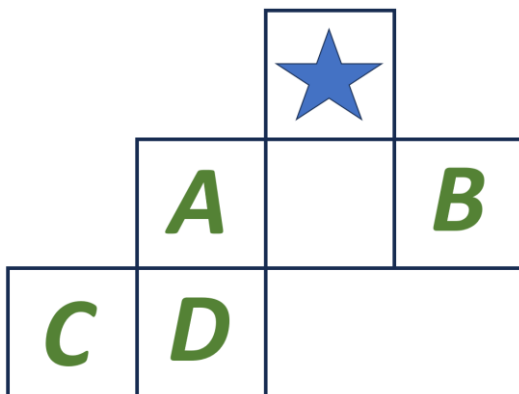
9.	<i>Which of these calculations has a different answer to the other three?</i>			
	(A) 38 x 34	(B) 72 x 18	(C) 36 x 36	(D) 54 x 24

10.	In the Eltham Grand Prix, Miles Behind drives at an average speed of 80 kilometres per hour, for two and a half hours. Max Throttle completes the same distance as Miles, but it only takes him two hours.			
	<i>What was Max's average speed, in kilometres per hour?</i>			
	(A) 64 km/h	(B) 100 km/h	(C) 120 km/h	(D) 160 km/h



11. Here is the net of a cube.

When constructed, which face will **not** share any edges with the face marked with the star?



A

B

C

D

12. A council splits a **£9144** donation equally between **four** local parks, to pay for improvements to their playground equipment.

How much money will each of the parks get?

(A) **£2036**


(B) **£2233.50**

(C) **£2236**

(D) **£2286**



13.	<i>Which of these calculations is incorrect?</i>		
	(A) $\frac{5}{12} \times 72 = 25$	(B) $\frac{3}{8} \times 72 = 27$	
	(C) $\frac{1}{4} \times 72 = 18$	(D) $\frac{2}{3} \times 72 = 48$	

14.	Local builder Sam Entmixer needs to buy some planks of wood. They usually cost £60 , but today their price has been reduced by 15% .			
	<i>How much does the wood now cost?</i>			
	(A) £42	(B) £45	(C) £51	(D) £57



15. A watermelon and a pumpkin have a combined mass of **17 kg**.
The watermelon's mass is 2kg greater than the pumpkin's.

What is the mass of the pumpkin?



(A) **7.5 kg**

(B) **8.25 kg**

(C) **8.5 kg**

(D) **9.5 kg**

16. Old Macdonald keeps his sheep in a square field with an area of **625m²**.

What is the perimeter of his field?

(A) **25m**

(B) **35m**

(C) **100m**

(D) **140m**



17.

$$\begin{array}{r} \bullet \quad \blacktriangle \quad \blacksquare \quad \star \\ + \quad \bullet \quad \blacktriangle \quad \star \\ \hline 2 \quad 0 \quad 2 \quad 6 \\ \hline \end{array}$$

In this addition, the four symbols \bullet , \blacktriangle , \blacksquare and \star each represent a **different digit**.

What is $\bullet + \blacktriangle + \blacksquare + \star$?

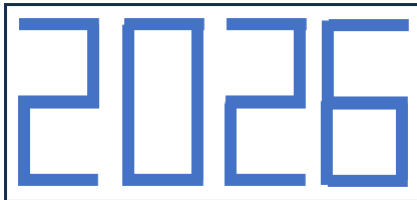
(A) 14

(B) 15

(C) 16

(D) 17

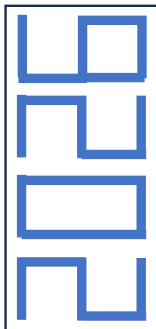
18.



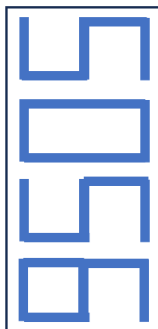
I draw the number 2026 like this on a piece of card, and then I rotate the card **90° clockwise**.

What will the card look like after the rotation?

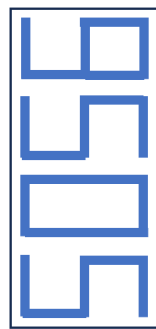
(A)



(B)



(C)



(D)





19.

Needham's Bakery sells bread rolls in three sizes:

Small rolls cost **25p**.

Medium rolls cost **40p**.

Large rolls cost **80p**.

Marge Reen visits the bakery and buys **six** rolls with a total cost of **£2.35**.

How many **medium rolls** did Marge buy?

(A) **one**

(B) **two**

(C) **three**

(D) **none**



20. A, B and C are three **different prime numbers**, where:

$$A < B < C$$

$$A + B + C = 90$$

One possible solution is **A = 2, B = 29 and C = 59**.

How many other solutions are there?

(A) **No other solutions**

(B) **One other solution**

(C) **Two other solutions**

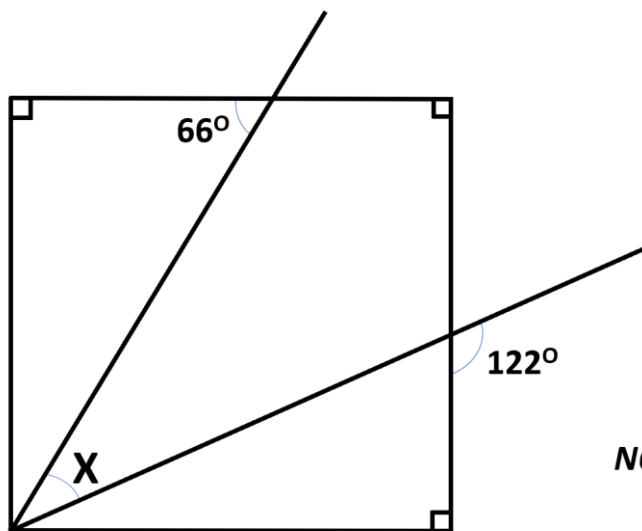
(D) **Three other solutions**



Section B : Problem-Solving Questions.

Each question has a space for you to show your workings and then a space for you to write your final answer.

21. *What is the size of angle X?*

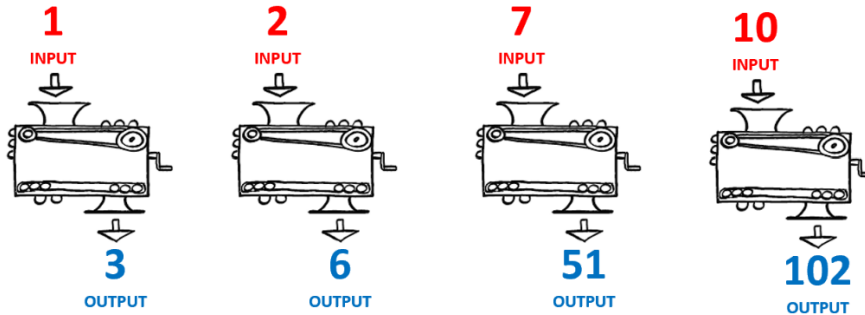


*NOT drawn
to scale*

Answer :



22. Here are some inputs and outputs from a function machine. It performs the same set of calculations on each input to create the output:



Which input will give an output of 198?

Answer :



23. Adama, Briony and Chloe each have a collection of gemstones.

Adama has double the number of gemstones which Chloe has.

Chloe has 10 less gemstones than Briony.

Together, they have **138** gemstones.

How many gemstones does each child have?



Answer : *Adama _____ gemstones*

Briony _____ gemstones

Chloe _____ gemstones



24.

How much greater is the answer to...

$$\left(\frac{1}{2} \times \frac{3}{4}\right) + \frac{5}{6}$$

than the answer to...

$$\left(\frac{1}{2} + \frac{3}{4}\right) \times \frac{5}{6} \quad ?$$

Give your answer as a fraction.

Answer :



25. **16,208** is the smallest 5-digit multiple of 2026 (8×2026), where **all of its digits are different**.

What is the **largest 5-digit multiple of 2026**, where **all of its digits are different**?

Answer :

END OF PAPER