TMC - 1

TeenEagle
MATHS

Rapid Fire - Sample Questions

1. *(Pattern & Sequences)*

- tower 1 has 1 block;
- tower 2 has 3 blocks;
- tower 3 has 5 blocks;
- tower 4 has 7 blocks.

How many blocks in Tower 6?

(A) 8 (B) 9 (C) 11 (D) 13

2. *(Numbers Operations)*

Anusha has 52 marbles.
She gives half to her brother, and 6 more to her sister.

How many marbles does Anusha have left?

(A) 20
(B) 18
(C) 15
(D) 14

3. *(Even and Odd Numbers)*

Which number makes the sum odd?

8 + ?

(A) 6 (B) 10 (C) 16 (D) 17

4. *(Place Value)*

Which number is 1 ten more than 26?

_____ (Number only)

5. *(Divisibility)*

A number ending in 0 is always divisible by 2, 5, and 10.

_____ (True or False)

Answer Key

1.	C
2.	A
3.	D
4.	36
5.	True

TMC - 2

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Rapid Fire - Sample Questions

1. *(Measurement Conversions)*

Convert 3 m 40 cm into centimeters.

(A) 304 cm (B) 340 cm (C) 3400 cm (D) 4000 cm

2. *(Patterns and Sequences)*

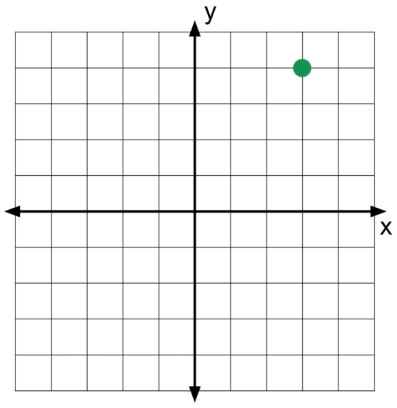
Find the missing number:

(A) 13 (B) 14 (C) 15 (D) 16

3. *(Geometry)*

Point *P* is at (3, 4) translated 5 units to the left and 2 units down.
What are the new coordinates of *P*?

(A) (8, 6) (B) (8, 2) (C) (-2, 2) (D) (2, 2)



4. *(Divisibility)*

A number divisible by 6 must also be divisible by 2 and 3.

_____ (True or False)

5. *(Divisibility)*

Which is the greatest two-digit number that is divisible by 4?

_____ (number only)

Answer Key

1.	B
2.	D
3.	C
4.	True
5.	96

TMC - 3

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Rapid Fire - Sample Questions

1. *(Functions)*

A function is defined as $f(x) = 2x + 3$.
Find $f(7)$.

(A) 12 (B) 13 (C) 14 (D) 17

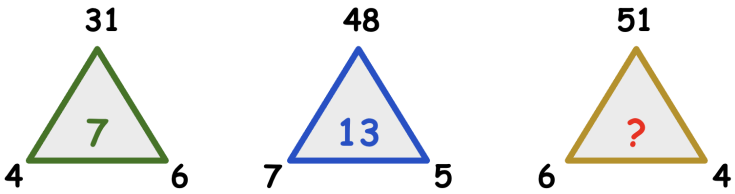
2. *(Place Value)*

How many times greater is the value of the digit 7 in 705,321 than the value of the digit 7 in 7,053?

(A) 10 (B) 100 (C) 1000 (D) 10000

3. *(Numbers and Operations)*

Look at the number pattern and find the missing number



(A) 27 (B) 24 (C) 21 (D) 18

4. *(Number Pattern)*

What is the missing number?

_____ (Number only)

5. *(Functions)*

$g(x) = f(x) + 10$ where $f(x) = x + 3$.

Find $g(10)$.

_____ (Number only)

Answer Key

1.	D
2.	B
3.	A
4.	66
5.	23

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Rapid Fire - Sample Questions

1. *(Number Operations)*

Find the value of the expression:

$$180 - (25 + 55) + 144 \div 12$$

(A) 92 (B) 102 (C) 112 (D) 122

2. *(Divisibility)*

The number 5☐8 is divisible by 9.

Which digit replaces ☐?

(A) 5 (B) 6 (C) 7 (D) 8

3. *(Probability)*

A bag has 4 red, 6 yellow, and 2 black balls.
One ball is picked at random.

What is the probability of selecting a yellow ball?

(A) $\frac{1}{3}$ (B) $\frac{1}{2}$ (C) $\frac{2}{3}$ (D) $\frac{4}{5}$

4. *(Percentages)*

A jacket costs £120.
It is discounted by 20%, and then £8 VAT is added.

What is the final price of the jacket?

£ _____ (Number only)

5. Let m and n be prime numbers such that:

$$m + n = 18, \quad m > n$$

Find the value of m.

_____ (Number only)

Answer Key

1.	C
2.	A
3.	B
4.	104
5.	13

TMC - 5

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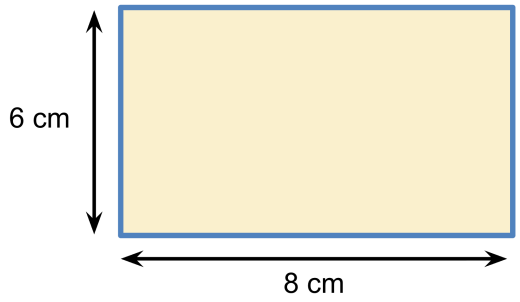
Rapid Fire - Sample Questions

1. *(Geometry)*



For the given rectangle, find the length of the diagonal.

(A) 8 cm (B) 10 cm (C) 12 cm (D) 15 cm

2. *(Ratio)*

If

$$\mathbf{x : y = 3 : 5}$$

and

$$\mathbf{y : z = 2 : 7}$$

find the ratio **x : y : z**.

(A) 3 : 5 : 7
(B) 6 : 10 : 35
(C) 6 : 5 : 35
(D) 12 : 10 : 35

3. *(Geometry)*

Two similar rectangles have corresponding sides in the ratio 4:7.

If the smaller rectangle has a perimeter of 36 cm, what is the perimeter of the larger rectangle?

(A) 49 cm (B) 51 cm (C) 56 cm (D) 63 cm

4. *(Percentages)*

After a 25% discount, the price of a jacket is £150.

What was the original price?

£ _____ (Number only)

5. *(Trigonometry)*

If $sin\theta = \frac{5}{13}$ and θ is acute, what is $cos\theta$?

_____ (Fraction)

Answer Key

1.	B
2.	B
3.	D
4.	200
5.	$\frac{12}{13}$

TMC - 6

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Rapid Fire - Sample Questions

1. *(Functions)*

If

$$g(x) = \frac{7}{x+2}$$

What is the domain of *g(x)*?

(A) $x \in \mathbb{R}, x \neq 2$ (B) $x \in \mathbb{R}, x \neq -7$ (C) $x \in \mathbb{R}, x \neq -2$ (D) $x \in \mathbb{R}$

2. *(Divisibility)*

What is the smallest three-digit positive integer divisible by 45?

(A) 105 (B) 135 (C) 180 (D) 225

3. *(Odd and Even Numbers)*

Which expression is always odd for any integer *t*?

(A) $2t$ (B) $2t + 1$ (C) t^2 (D) $4t$

4. *(Exponential Equations)*

Solve:

$$2^{3x} = 64$$

$x =$ _____ (Number only).

5. *(Quadratic Equations)*

Find the product of the roots of:

$$2x^2 - 5x + 7 = 0$$

_____ (Fraction).

Answer Key

1.	C
2.	B
3.	B
4.	2
5.	$\frac{7}{2}$