

TMC - 2



TeenEagle
MATHS

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Qualification Round Questions

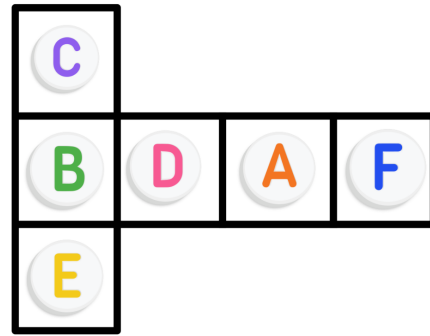
1. (Logical Thinking)

3
points

An unfolded cube net is shown with faces labelled A, B, C, D, E and F.

If face D is on the bottom and face B is to its right, which face is on the top?

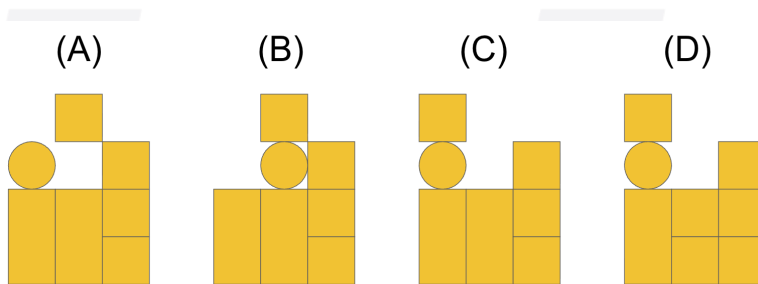
- (A) C
- (B) D
- (C) E
- (D) F



2. (Logical Thinking)

3
points

What is the 2D top view of the following 3D shape?



3. (Logical Thinking)

3
points

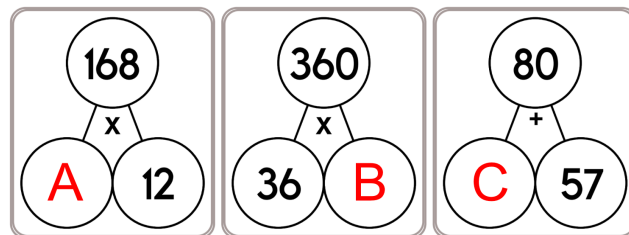
Some numbers are missing from the figures shown.

In the first two figures (from the left), the number written above each figure is obtained by multiplying the numbers on the circles below it.

In the last figure, the number written above is obtained by adding the two numbers on the balloons below.

What is the value of $A + B - C$?

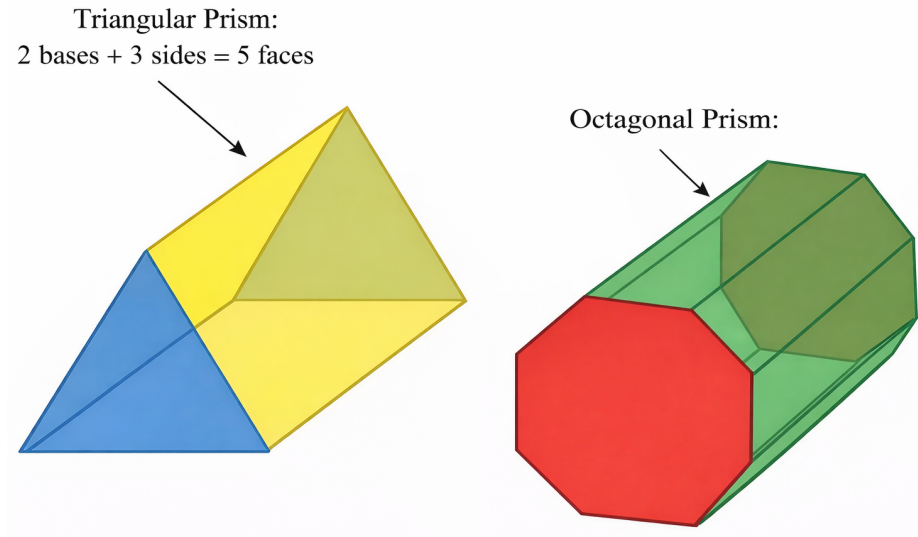
- (A) 1
- (B) 10
- (C) 14
- (D) 23



4. (Geometry)

3
points

A triangular prism has 5 faces.
How many faces does an octagonal prism have?

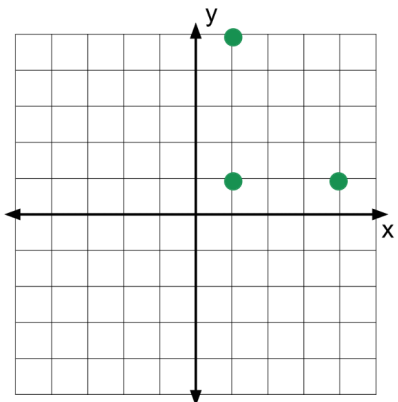


- (A) 8 (B) 9 (C) 10 (D) 11

5. (Geometry)

3
points

A triangle ABC has coordinates A(1,1), B(4,1), and C(1,5).
What is the area of this triangle?



- (A) 6 units² (B) 7 units² (C) 10 units² (D) 12 units²

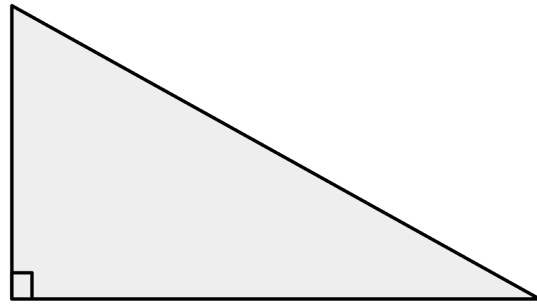
6. (Geometry)

3
points

A right-angled triangle has sides of 9 cm and 12 cm adjacent to the right angle.

What is the length of the hypotenuse?

- (A) 3 cm
- (B) 10 cm
- (C) 15 cm
- (D) 21 cm



7. (Percentage)

3
points

The side of a square is increased from 5 cm to 10 cm.

By what percentage does its area increase?

- (A) 50%
- (B) 100%
- (C) 300%
- (D) 400%



5 m



10 m

8. (Numbers)

3
points

What is the value of the expression below:

$$3.6 \div 0.12 = ?$$

- (A) 0.3
- (B) 3
- (C) 30
- (D) 300

9. (Numbers)

3
points

In the TeenEagle basketball team, there are five players.
They are aged 15, 17, 15, 18, and 20.

What is the median age of the players?

- (A) 15
- (B) 17
- (C) 18
- (D) 20

10. (Numbers)

3
points

For the algebraic equation provided below, find the correct value of x .

$$120 - 5x = 40$$

- (A) $x = 16$ (B) $x = 24$ (C) $x = 28$ (D) $x = 32$

11. (Fractions)

4
points

Solve the expression below:

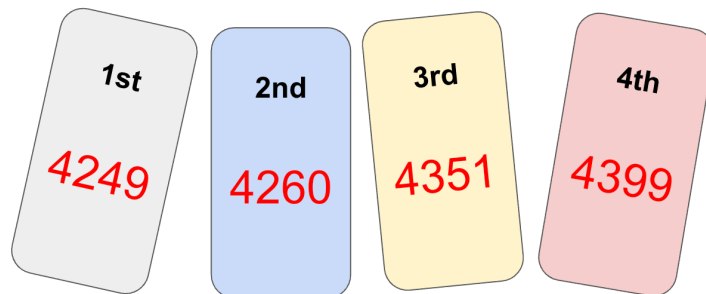
$$2\frac{1}{3} - \frac{5}{6}$$

- (A) $1\frac{1}{2}$ (B) $1\frac{2}{3}$ (C) $1\frac{5}{6}$ (D) $2\frac{1}{6}$

12. (Numbers)

4
points

A number is rounded to the nearest hundred to give 4,300.
Which of the following could be the original number?



- (A) 1st card (B) 2nd card (C) 3rd card (D) 4th card

13. (Decimals)

4
points

Calculate the expression below:

$$(4.8 - 1.75) \times 0.4$$

- (A) 0.122 (B) 1.02 (C) 1.22 (D) 12.2

14. (Geometry)

4
points

A right-angled triangular flag has legs 9 cm and 12 cm.
A ribbon is placed along the entire border of the triangle.



How many centimeters of ribbon are needed?

- (A) 36 cm (B) 25 cm (C) 20 cm (D) 15 cm

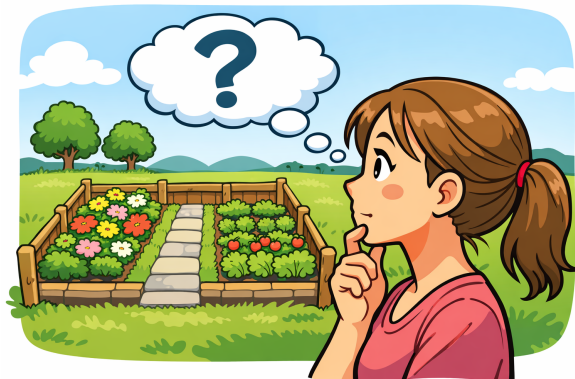
15. (Geometry)

4
points

Jasmine bought a rectangular garden.
Its length is twice its width.

If its area is 72 m^2 , what is its perimeter?

- (A) 28 m
(B) 32 m
(C) 36 m
(D) 48 m



16. (Geometry)

4
points

The garden is composed of two rectangles.

The overall height is 10 m, and the overall width is 12 m.

The smaller inner heights are 2 m and 3 m.

The smaller inner width is 5 m.

What is the perimeter of the garden?

- (A) 35 m
- (B) 44 m
- (C) 47m
- (D) 53 m



17. (Numbers)

4
points

A number becomes **60** after the following steps:

- Multiply the number by 3.
- Add 12.
- Divide by 2.

What was the original number?

- (A) 20
- (B) 24
- (C) 36
- (D) 48

18. (Numbers)

4
points

At TeenEagle School, 168 students each donated 6 books.

The books were packed equally into 14 boxes.

Then each box was shared equally among 3 libraries.

How many books did each library receive?

- (A) 18
- (B) 24
- (C) 36
- (D) 72

19. (Fractions)

4
points

Calculate the expression below:

$$\frac{7}{12} \times \frac{18}{21}$$

- (A) $\frac{1}{2}$ (B) $\frac{3}{4}$ (C) $\frac{9}{14}$ (D) $\frac{21}{24}$

20. (Decimals)

4
points

A standard TeenEagle Juice bottle contains 1850 mL of juice.
Each standard cup holds 250 mL of liquid.
After pouring some whole number of cups, there is 100 mL of juice left.

How many cups were poured?

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



21. (Logical Thinking)

5
points

Look at the pattern in the given figure.

What number goes in the final row?

- (A) 16
(B) 14
(C) 12
(D) 10

$$\text{Deer} + \text{Deer} = 8$$

$$\text{Deer} + \text{Rabbit} = 11$$

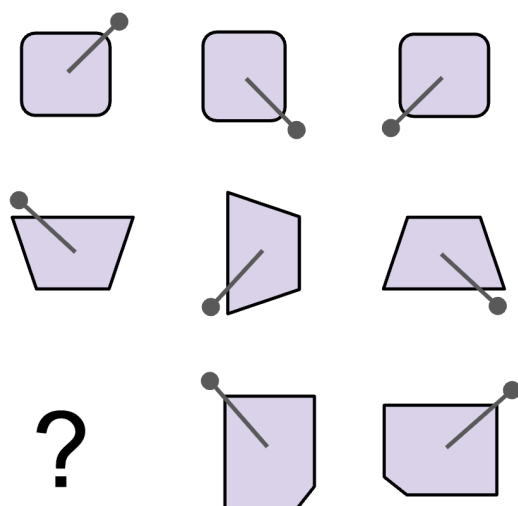
$$\text{Rabbit} + \text{Kangaroo} = 15$$

$$\text{Kangaroo} + \text{Kangaroo} = ?$$

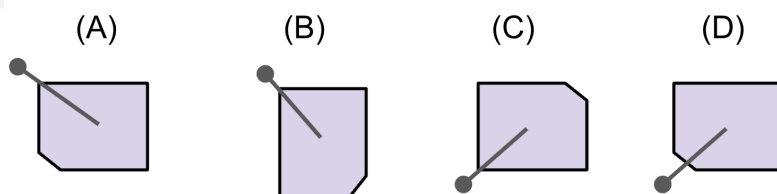
22. (Logical Thinking)

5
points

Look at the pattern of the figures below.



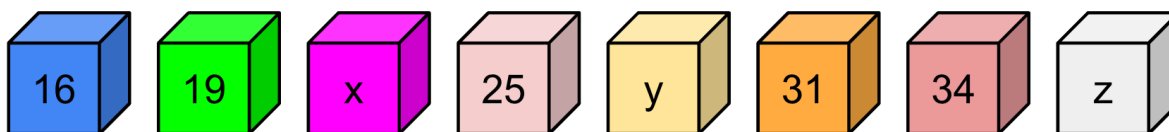
What is the missing figure?



23. (Logical Thinking)

5
points

Check the pattern of the numbers in the figures below.



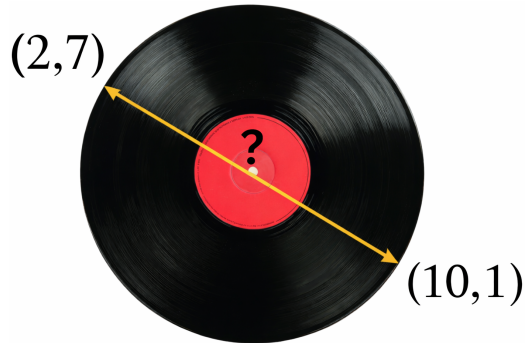
What is the value of the $z - y + x$?

- (A) 31 (B) 43 (C) 57 (D) 87

24. (Geometry)

5
points

A line segment is drawn from $(2, 7)$ to $(10, 1)$.
The segment is the diameter of a circle.



What are the coordinates of the circle's centre?

- (A) $(12, 8)$ (B) $(8, -6)$ (C) $(6, 4)$ (D) $(4, 3)$

25. (Geometry)

5
points

Margaret copies a shape from her book onto A3 paper, keeping it similar to the original shape.
She makes the drawing 3 times larger in each side length.
The original shape has an area of 10 cm^2 .

What is the area of Margaret's enlarged drawing?

- (A) 30 cm^2 (B) 60 cm^2 (C) 90 cm^2 (D) 300 cm^2

26. (Numbers)

5
points

A club printed 2,400 flyers.
They packed them equally into 18 bundles, with 6 flyers left over.
Then they shared the bundles equally among 9 classrooms.

How many flyers did each classroom receive?

- (A) 14 (B) 133 (C) 146 (D) 266



27. (Fractions)

5
points

Nina used $\frac{2}{3}$ of a 12-metre ribbon she had at her home.

Then she used $\frac{1}{4}$ of the remaining ribbon.

How many metres are left?

- (A) 2 metres (B) 3 metres (C) 4 metres (D) 6 metres



28. (Ratio and Proportions)

5
points

A tennis coach shares a reward among his three students at school.

These three students (Tom, Lina, and Ken) receive money in the ratio of 3 : 2 : 5.

If Lina receives £18, what is the total reward?

- (A) £72 (B) £90 (C) £108 (D) £120

29. (Logical Thinking)

5
points

Each card shows a letter with an associated price.

A £6	B £1	C £3	D £4	E £7	F £6	G £8	H £9	I £10
J £7	K £4	L £7	M £8	N £4	O £3	P £9	Q £12	R £5
S £4	T £5	U £12	V £6	W £8	X £5	Y £6	Z £9	

Nona wants to form the word “TEENEAGLE” using these cards.

What is the total amount of money she needs to spend to make this word?

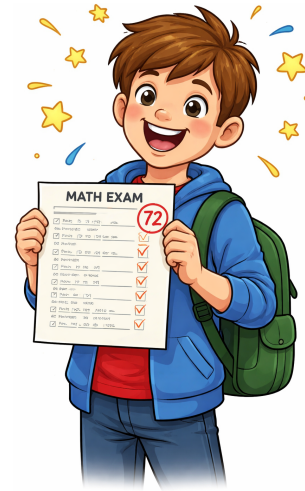
- (A) £58 (B) £60 (C) £62 (D) £71

30. (Percentages)

Alex scored 72 marks in maths exam in the TeenEagle Olympiad.
This is 80% of the total marks.

What are the total marks?

- (A) 80 marks
- (B) 85 marks
- (C) 90 marks
- (D) 100 marks



5
points

Answer Key

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

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