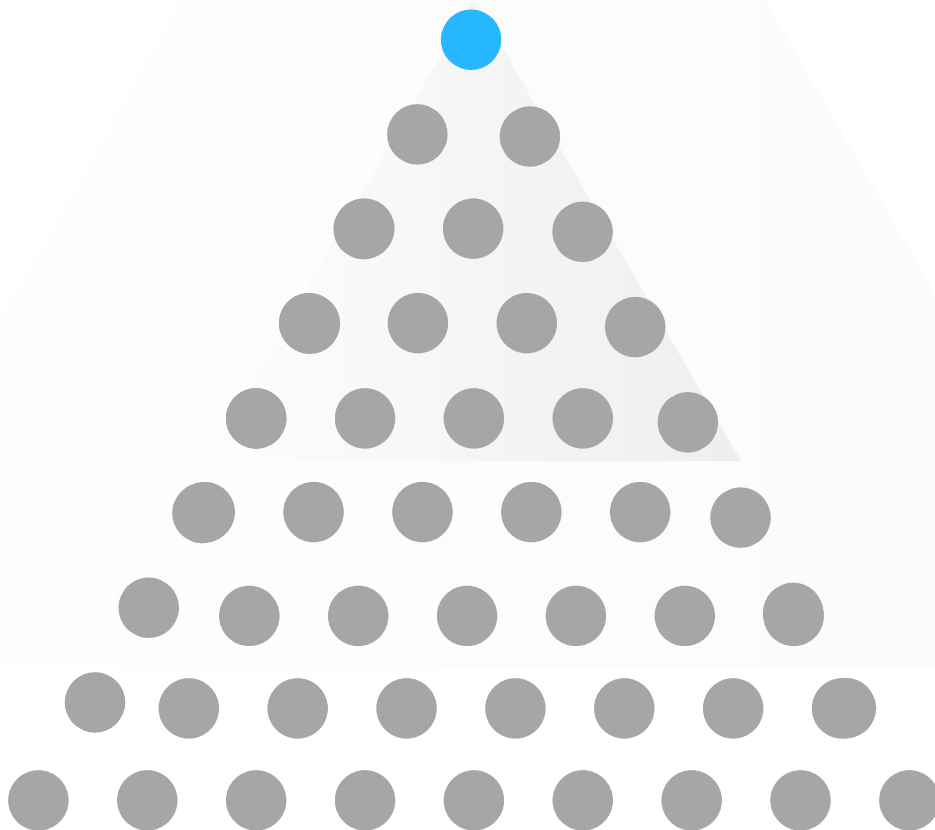


CLASS 7

MATHEMATICS

PAPER ID: 7M23



QUESTIONS: 30

DURATION: 45 MINS

INSTRUCTION: Carefully read the questions before answering. Darken only one oval for one question. More than one darkened oval will result in incorrect response.

EACH QUESTION CARRIES 1 MARK. NO MARKS WILL BE CUT FOR WRONG ANSWERS.

Breath In
1...2...3...4..



Breath Out
1...2...3...4..



Repeat Twice

Rough Work

1

Joshua has a triangular flower bed in his garden. The triangle is right-angled with a base of 8 m and a height of 6 m.

What is the area of the flower bed?

- A.** 48 m^2 **B.** 14 m^2 **C.** 24 m^2 **D.** 26 m^2

2

$$11jk + 8k^2 - \underline{\hspace{1cm}} - 10k^2 = 6jk - 2k^2$$

Which of the following completes the sentence?

- A.** $5jk$ **B.** $6jk$ **C.** $9k^2$ **D.** $8k^2$

3

What are possible values for x and y ?



- A.** 50 & 70 **B.** 70 & 60
C. 30 & 80 **D.** 40 & 50

4

In the equation $x + 4 = 10$, x is an unknown number. However, in the equation $y = x + 4$, x is a variable because x and y are related to each other.

In which of these equations is x a variable?

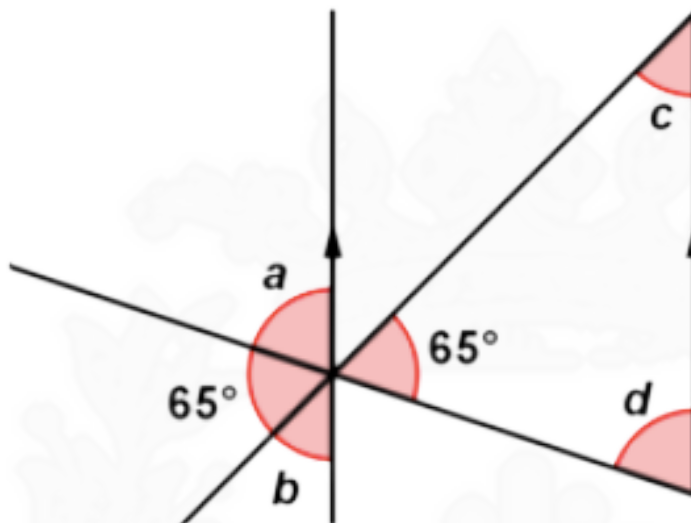
$3 + x = 7$	$y = x - 6$	$y = x + 6$	$x - 4 = 5$
p	q	r	s

- A.** p & q **B.** q & r **C.** r & s **D.** None

5

Rough Work

Work out $a + b + c + d$



- A. 270° B. 135° C. 280° D. 360°

6

Kartik added two integers and found that their sum is LESS than each of these integers.

Which of these is TRUE about the two integers?

- A. One of the integers is 0.
 B. Both of them are negative integers.
 C. One is positive and the other a negative integer.
 D. None of the above

7

For any number y .

$5y$ is the same as

- A. $5 + y$
 B. $y \times y \times y \times y \times y$
 C. y^5
 D. $y + y + y + y + y$

8

Rough Work

Which of these is the GREATEST?

200% of 20

p

20% of 200

q

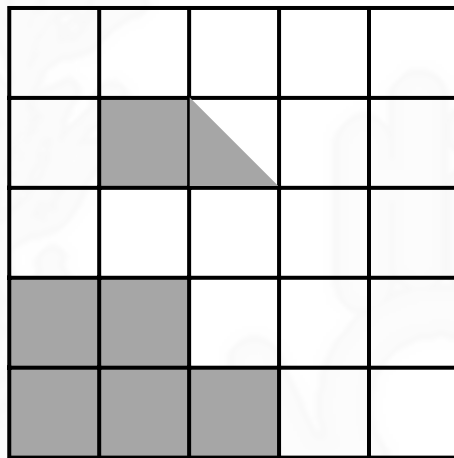
2% of 2000

r

A. p **B.** q **C.** r **D.** All of these

9

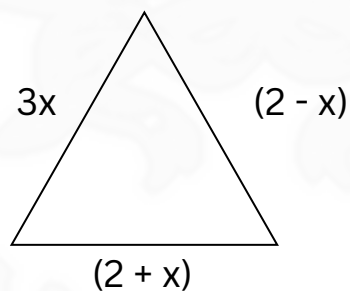
What decimal fraction of the figure below is shaded?



A. 0.65 **B.** 0.065 **C.** 3.84 **D.** 0.26

10

The length of the sides of a triangle are $3x$ units, $(2 - x)$ units and $(x + 2)$ units.



Calculate the perimeter of the triangle

A. $5x + 4$ units **B.** $x + 7$ units
C. $3x + 4$ units **D.** $3x$ units.

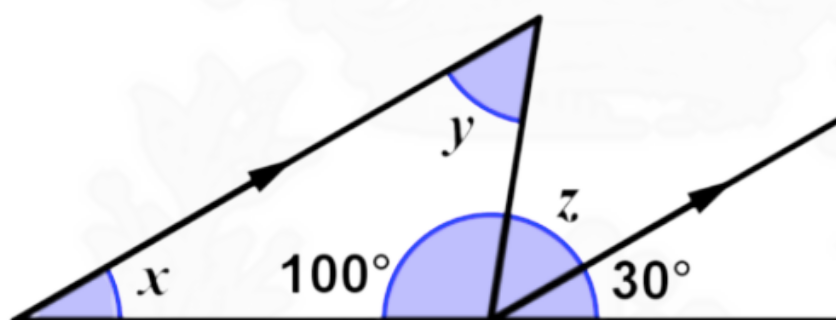
11

$$1.58 \% = ?$$

- A.** 1.58 **B.** 0.158 **C.** 0.0158 **D.** 0.00158

12

Work out $x + y + z$



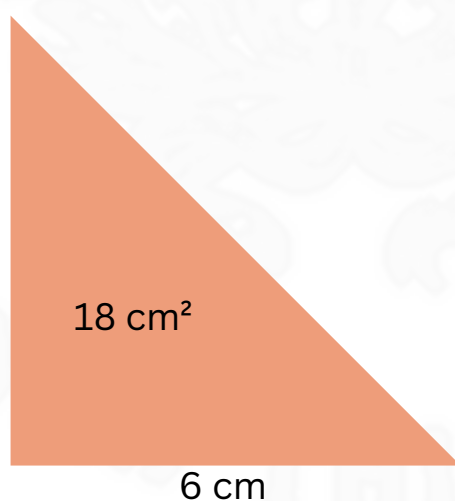
- A.** 130 **B.** 180 **C.** 170 **D.** 140

13

The area of a triangle is 18 cm^2

The base of the triangle is 6 cm.

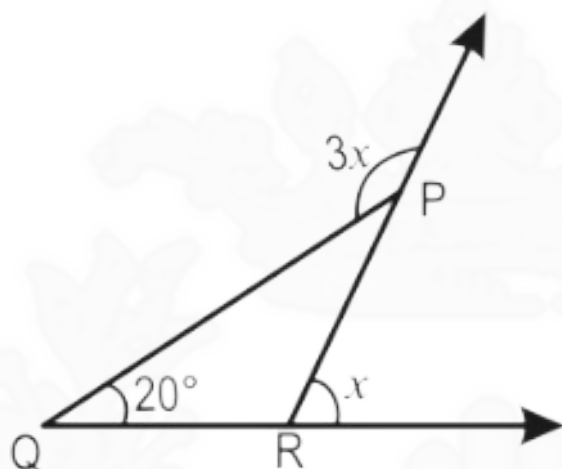
Calculate the height of the triangle.



- A.** 3 cm **B.** 4 cm
C. 5 cm **D.** 6 cm

14

The triangle PQR's sides QR and RP are stretched in the visual below. What is the angle with the x marked in degrees?



- A. 30° B. 40° C. 50° D. 60°

15

Which of these is the same as $\{(-889) \times 74\} + \{(-889) \times 9\}$?

- A. $(889) \times (74 - 9)$ B. $(-889) \times (74 + 9)$
C. $(-889) \times 74 + 9$ D. $(-889) \times 74 \times 9$

16

Which of the following values would 158.85×48.9 be closest to if $1.588 \times 4.89 = 7.76532$?

- A. 780 B. 7800
C. 78000 D. 77000

17

Which of the following rational numbers has a terminating decimal expansion?

- A. $\frac{1}{3}$ B. $\frac{7}{11}$
C. $\frac{8}{3}$ D. $\frac{3}{4}$

18

In the expression $2xy - 8y + 5$, which term has a factor 'x'?

- A. $2y$ B. -8 C. $8y$ D. $5y$

19

In a classroom, there are 60 students. The teacher divides the students into three groups: A, B, and C.

Group A consists of 20% of the students.

Group B consists of 40% of the students.

The rest of the students are in Group C.

How many students are there in Group C?

- A. 24 B. 21 C. 18 D. 20

20

A triangular garden has one side that is 8 meters long and another side that is 15 meters long. What is the length of the shortest rod that can be placed diagonally across the garden, connecting two non-adjacent corners?

- A. 16 B. 17 C. 18 D. 20

21

Which of the following rational numbers has a recurring decimal expansion of 6 digits repeating pattern?

- A. $\frac{5}{7}$ B. $\frac{4}{7}$
C. $\frac{1}{7}$ D. $\frac{2}{7}$

22

Rough Work

The green team have n basketball players.

The blue team have 2 fewer players than the green team.

The red team have 10 more players than the green team.

Which expression is correct for the total number of players in all 3 teams?

A. $n - 2 + 10$
 E. $n - 2 + 8$

B. $3n + 8$
 D. $2n - 10$

23

Which diagram is impossible?



B.



D.

24

Which of the following has the greatest value?

A. $(-100) + 100$ B. $100 + (-100)$
 C. $(-100) + (-100)$ D. $(-10000) + 10$

25

$$91.25 \div 0.58 = 15732.75$$

$$91.25 \div \boxed{} = 15732.75$$

A. 0.0058 B. 0.058 C. 0.58 D. 58

26

Which of these number(s) is/are GREATER than -600?

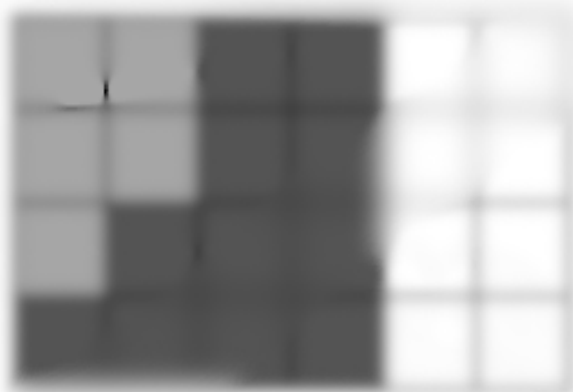
-700 -70 0

P Q R

A. Only p B. Only P & q
C. Only r D. Only q & r

27

What is the ratio of black squares to white squares to grey squares in this rectangle?



A. 10 : 8 : 5 B. 10 : 5 : 8
C. 8 : 10 : 7 D. 8 : 11 : 5

28

The angles in a triangle are in the ratio 3 : 3 : 2

What size is the largest angle?

A. 60° B. 80° C. 90° D. 70°

29

Iced tea is made from tea, water and lemon juice in the ratio 5 : 1 : 4

Tom wants to make 4 litres of the drink.

How much lemon juice does he need?

A. 1600 ml
C. 1200 ml

B. 1400 ml
D. 1500 ml

30

Find x ?



A. 65° B. 60° C. 55° D. 50°

----- End of the question paper -----

Use it for Rough Work

This page doesn't contain any questions.
Use it for Rough Work



Until you receive your iThinkersOlympiad results, kindly hold onto the question paper as it will be essential for a complete understanding of your results.



iThinkersOlympiad

BY



We value your feedback!

We welcome your feedback and suggestion on this paper! Please email us at feedback@fivesep.in or visit



www.ithinkersolympiad.com/feedback

MATHS

PAPER ID: 7M23
QUESTIONS: 30
DURATION: 45 MINS

CLASS 7

2023