

QUESTION PAPER

PERIODIC TEST-2

CLASS	SECTION	EXAM CODE
7	A	3246971
7	B	3246981
7	C	3246991
7	D	3247001

SCHOOL

HIM Academy Public School

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1. There are 40 questions in the paper. All are compulsory.
 2. Tick or circle the option which is your answer.
 3. Show your working on a separate sheet of paper wherever you need to.
 4. For calculations take pi as $22/7$.
 5. Please check your answers carefully before submitting the test. Once submitted, the answers CANNOT be changed.



Q: 1 In $\triangle ABC$, $\angle BAC = (6x + 3)^\circ$ and $\angle ABC = (3x - 6)^\circ$. Which of these is $\angle BCA$?

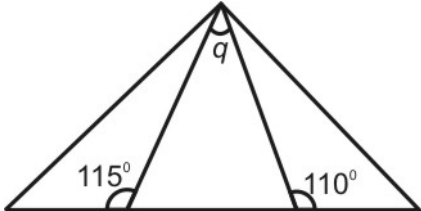
1 $180^\circ - [(6x + 3)^\circ - (3x - 6)^\circ]$

2 $180^\circ - [(6x + 3)^\circ + (3x - 6)^\circ]$

3 $180^\circ + (6x + 3)^\circ - (3x - 6)^\circ$

4 $180^\circ + (6x + 3)^\circ + (3x - 6)^\circ$

Q: 2 What is the measure of the angle marked 'q' in the figure?



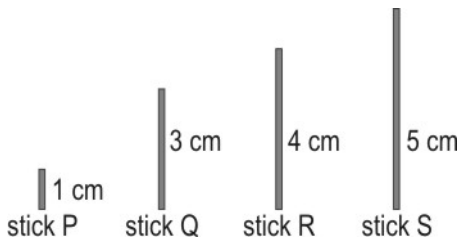
1 45°

2 65°

3 67.5°

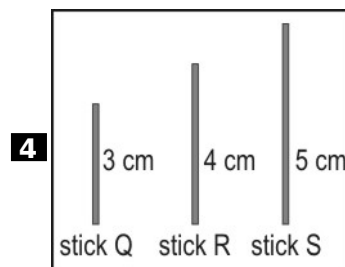
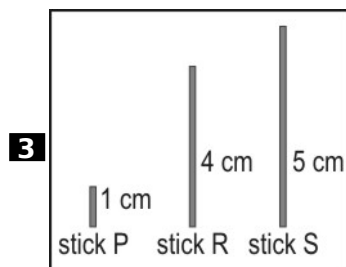
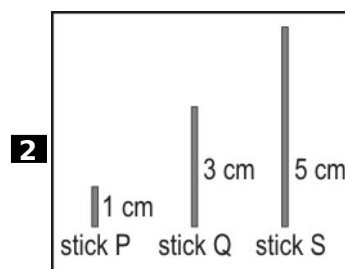
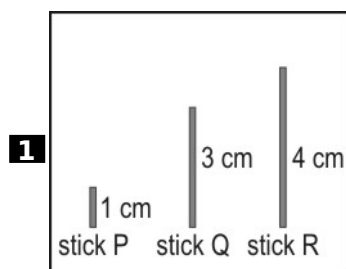
4 70°

Q: 3 Neel used three of four sticks shown below and formed a triangle. The ends of the sticks touched each other. There was no overlap between the sticks.



(Note: Figure is not to scale.)

Which three sticks did he use?



Q: 4 The length of the sides of a right-angled triangle are 1.6 cm and 1.2 cm. What is the length of the hypotenuse?

1 1.12 cm

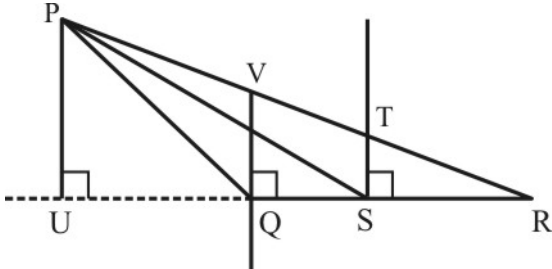
2 2 cm

3 2.8 cm

4 4 cm



Q: 5 In the triangle PQR shown below, which of these line segments is an altitude of the triangle?



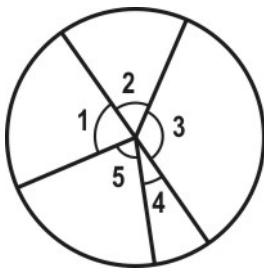
1 ST

2 QV

3 PU

4 PS

Q: 6 Shown here is a circle.



Which 3 angles can form the 3 angles of a triangle?

1 $\angle 1, \angle 2$ and $\angle 3$

2 $\angle 2, \angle 3$ and $\angle 4$

3 $\angle 1, \angle 2$ and $\angle 5$

4 $\angle 1, \angle 4$ and $\angle 5$

Q: 7 A triangle PQR lies inside another larger triangle XYZ.

Triangle XYZ lies inside another still larger triangle LMN.

For which triangle, will the sum of all of its 3 angles be the LEAST?

1 PQR

2 XYZ

3 LMN

4 (All triangles will have the same sum of angles.)

Q: 8 The diagonal of a rectangle is 17 cm.

If the length of the rectangle is 15 cm, what is its breadth?

1 2 cm

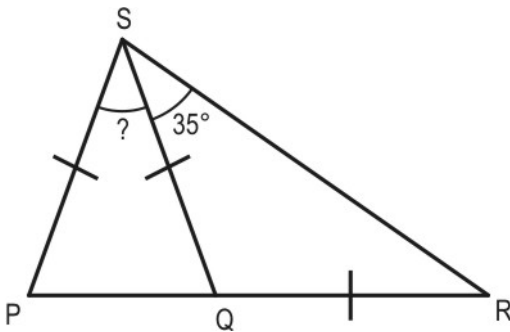
2 5 cm

3 8 cm

4 11 cm



Q: 9 In $\triangle PQS$ and $\triangle QRS$ below, $PS = SQ = QR$.



What is the measure of the angle shown with a question mark above?

- 1** 35° **2** 40° **3** 45° **4** 70°

Q: 10 Rama deposited Rs 9000 in a bank at 5% simple interest for a period of 3 years. What would be the total interest paid by the bank at the end of 3 years?

- 1** Rs 10350 **2** Rs 1350 **3** Rs 1250 **4** Rs 450

Q: 11 Miss Sood borrowed Rs 35000 from a bank at $7\frac{1}{2}\%$ simple interest per year.

In how many years will the amount become Rs 42875?

- 1** $1\frac{1}{2}$ years **2** 3 years
3 6 years **4** $16\frac{1}{3}$ years

Q: 12 Aarthi ran a marathon. She completed $\frac{3}{8}$ of the course before it began to rain. What percent of the marathon did she run before the rain?

- 1** 30% **2** 36.5% **3** 37.5% **4** 38%

Q: 13 $\frac{59}{1000}$ written as percentage would be

- 1** 0.059%.
2 5.9%.
3 59%.
4 (It cannot be written as percentage because the denominator is not 100.)

Q: 14 Ram spend Rs 45000 on transport in 2020. The cost of his transportation increased by 18% in 2021.

Which of the following gives the amount Ram spends on transport in 2021?

- 1** Rs 8100 **2** Rs 36900 **3** Rs 53100 **4** Rs 62658

Q: 15 In a pond, the ratio of black ducks and white ducks swimming is 6:7. If the number of white ducks is 42, what is the TOTAL number of ducks swimming in the pond?

- 1** 91 **2** 83 **3** 78 **4** 36



Q: 16 Ratio of 36 g to 1 kg is _____.

- 1** 36:1 **2** 18:5 **3** 9:25 **4** 9:250

Q: 17 Manish purchased a house for Rs 70,000. Five years later, he sold it for 18% profit.

What was its selling price?

- 1** Rs 12,600 **2** Rs 71,800 **3** Rs 82,600 **4** Rs 88,000

Q: 18 A man deposits Rs 6400 at 3% interest per annum. In how many years will he earn a simple interest of Rs 960?

- 1** 7 year **2** 4 years **3** 5 years **4** 6 years

Q: 19 The ratio of red balls to blue balls in a collection of balls is 4:5. What percentage of balls are blue?

- 1** $\frac{5}{9}$ % **2** 50% **3** 55.5% **4** 80%

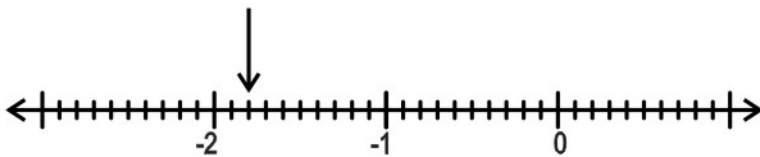
Q: 20 What percentage of 540 is 675?

- 1** 25% **2** 80% **3** 125% **4** 135%

Q: 21 Rohit needs 12 lemons to make lime juice for 8 people. However, he finds that actually there are 10 people. How many MORE lemons would he need?

- 1** 2 **2** 3 **3** 4 **4** 5

Q: 22 What rational number does the pointer on the number line below indicate?



- 1** $-1 \frac{2}{10}$ **2** $-2 \frac{2}{10}$ **3** $-1 \frac{8}{10}$ **4** $-2 \frac{8}{10}$

Q: 23 Arrange the following in increasing order.

$-\frac{1}{8}, \frac{1}{10}, \frac{2}{5}, -\frac{1}{12}, \frac{1}{5}$

- 1** $-\frac{1}{12}, \frac{1}{10}, -\frac{1}{8}, \frac{1}{5}, \frac{2}{5}$
- 2** $-\frac{1}{8}, -\frac{1}{12}, \frac{1}{10}, \frac{1}{5}, \frac{2}{5}$
- 3** $\frac{1}{5}, -\frac{1}{8}, \frac{1}{10}, \frac{2}{5}, -\frac{1}{12}$
- 4** $-\frac{1}{12}, -\frac{1}{8}, \frac{1}{5}, \frac{2}{5}, \frac{1}{10}$

Q: 24 Which of the following numbers is expressed in its simplest form?

- 1** $-\frac{14}{21}$ **2** $-\frac{3}{14}$ **3** $\frac{5}{15}$ **4** $\frac{11}{33}$



Q: 25 $\frac{7}{\boxed{?}} = \frac{-63}{-99}$

Which of these should come in the empty box above to make the number sentence true?

1 -11

2 -9

3 9

4 11

Q: 26 $\frac{1}{4} - (-\frac{1}{6})$

1 $-\frac{5}{12}$

2 $\frac{5}{12}$

3 $\frac{1}{6}$

4 $-\frac{1}{6}$

Q: 27 $\frac{-8}{11} \times 5 =$

1 $\frac{-8}{55}$

2 $\frac{-40}{55}$

3 $\frac{-40}{11}$

4 $-5\frac{8}{11}$

Q: 28 $(-\frac{6}{12}) \times (-\frac{4}{p}) = 2$

What is the value of p ?

1 -1

2 $-\frac{1}{2}$

3 $\frac{1}{2}$

4 1

Q: 29 $(-\frac{4}{6}) \div (-\frac{6}{4}) =$

1 -1

2 $-\frac{16}{36}$

3 $\frac{16}{36}$

4 1

Q: 30 What is the maximum number of rational numbers that can be found between two rational numbers?

1 0

2 1

3 2

4 (There are infinitely many rational numbers found between any two rational numbers.)

Q: 31 Which of the following rational numbers lie between $(-\frac{4}{11})$ and $(-\frac{1}{2})$?

i) $-\frac{3}{11}$

ii) $-\frac{2}{5}$

1 only i)

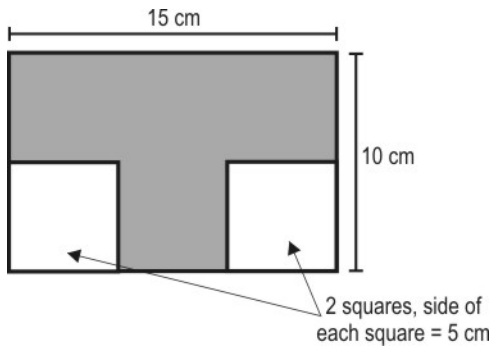
2 only ii)

3 both i) and ii)

4 neither i) nor ii)



Q: 32 What is the area of the shaded part in the figure shown here?



- 1 200 cm²
- 3 125 cm²

- 2 150 cm²
- 4 100 cm²

Q: 33 How many square tiles of side 9 cm are required to cover a rectangle of length 36 cm and breadth 18 cm exactly, without any tiles overlapping?

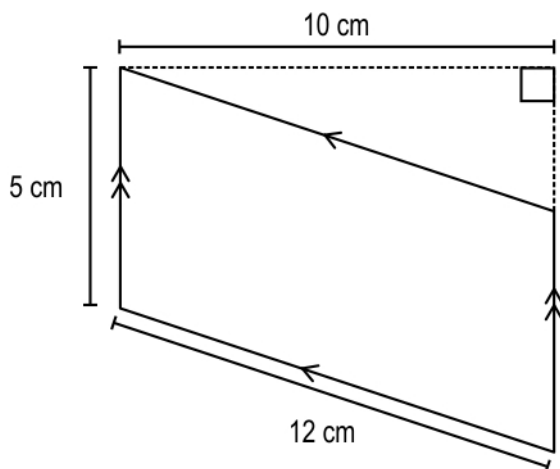
- 1 4

- 2 6

- 3 8

- 4 10

Q: 34 Shown below is a parallelogram.



(Note: The figure is not to scale.)

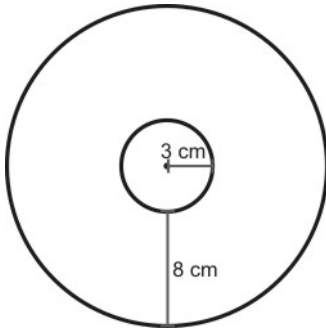
What is its area?

- 1 25 cm²
- 3 60 cm²

- 2 50 cm²
- 4 120 cm²



Q: 35 The figure below shows 2 circles with their centres at the same point.



Which of the following expressions gives the circumference of the outer circle in cm?

1 $\frac{1}{2} \pi (16 + 3)$

2 $\pi (8 + 3)$

3 $\pi (16 + 6)$

4 $2\pi (8 + 6)$

Q: 36 The circumference of a circle is 50 cm. Its area is

1 $\frac{25}{\pi}$ sq cm.

2 $\frac{625}{\pi}$ sq cm.

3 $(\frac{625}{\pi})^2$ sq cm.

4 625 sq cm.

Q: 37 The length of a rectangle is 6 cm longer than its breadth. If the breadth is 10 cm, what is the perimeter of the rectangle?

1 16 cm

2 28 cm

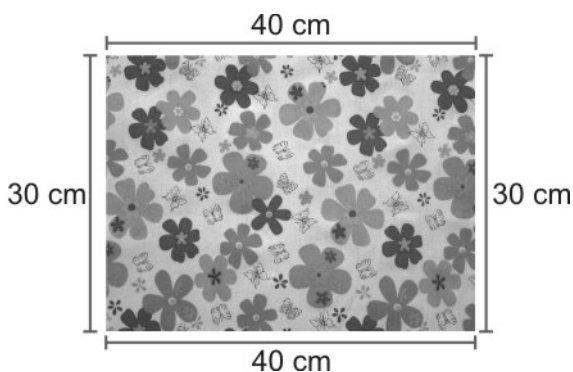
3 32 cm

4 52 cm

Q: 38 Shown below is a pillow cover 40 cm long and 30 cm wide.

Milli wants to stitch lace along the border of the pillow cover.

How much lace will Milli need to buy to stitch along the border of TWO such pillow covers?



1 280 cm

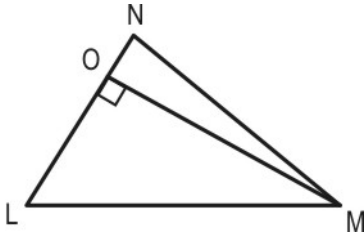
2 160 cm

3 140 cm

4 120 cm



Q: 39 The area of the triangle LMN shown below is 30 cm^2 . $OM = 10 \text{ cm}$.



What is the length of the side LN?

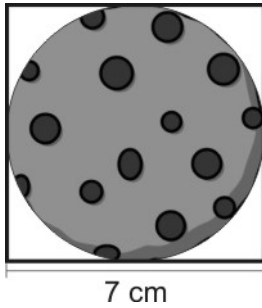
1 6 cm

2 12 cm

3 15 cm

4 20 cm

Q: 40 Shown below is a cookie in a square-shaped box.



How much area will the cookie cover in the box?

1 7 cm^2

2 38.5 cm^2

3 44 cm^2

4 49 cm^2

End of Questions in Paper

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