

- Instructions :-
- 1) Question paper and answer paper are separate sheets.
 - 2) Write the number of correct alternative out of four alternatives given for each question in the block provided in the answer sheet.
 - 3) Write the answers with ink or ball pen.
 - 4) Rough work may be done on back side of the answer sheet with pencil.
 - 5) Each question carries two marks.
 - 6) No marks will be given if the answer is scratched.

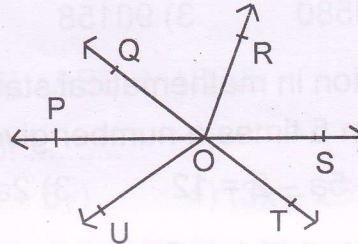
1) Find twin prime numbers from following.

- 1) 97, 101 2) 101, 103 3) 103, 107 4) 37, 41

2) What is multiplicative inverse of : $\frac{-17}{29}$

- 1) $\frac{-17}{+29}$ 2) $\frac{-29}{17}$ 3) $\frac{-17}{-29}$ 4) $\frac{29}{17}$

3) How many pairs of opposite rays are there in the given figure.



- 1) 4 2) 3 3) 2 4) 1

4) Salary of a salesman is Rs. 5000 per month. He is getting 5% commission of sales. If he sells the product of Rs. 20000 in that month, how much will be his total income that month ?

- 1) Rs. 25000 2) Rs. 20,000 3) Rs. 6000 4) Rs. 26000

5) $\sqrt{1^3 + 2^3 + 3^3} = ?$

- 1) 6 2) 6^2 3) 6^3 4) $\sqrt{36^3}$

6) Simplify and choose proper answer from given below.

$$3\frac{5}{7} \times \frac{3}{13} - \frac{1}{2} \div 4$$

- 1) $\frac{56}{41}$ 2) $\frac{41}{56}$ 3) $-\frac{41}{56}$ 4) $\frac{55}{56}$

7) $0.05 \times 0.09 \times 5 = ?$

- 1) 0.0225 2) 0.225 3) 0.0025 4) 0.00225

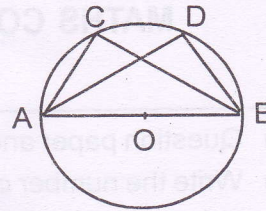
8) Length and breadth of a rectangle are 15 cm and 8 cm respectively. Find the measurement of its diagonal.

- 1) 18 cm. 2) 17 cm. 3) 19 cm. 4) 23 cm.

9) 4 water pumps fill an empty water tank in 4 hours. How many water pumps of same type will fill the empty water tank in 5 hours and 20 minutes ?

- 1) 3 2) 6 3) 5 4) 2

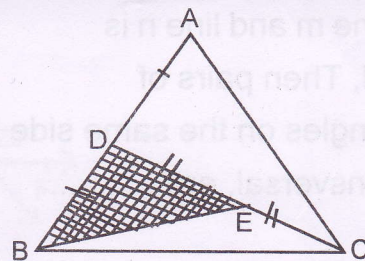
- 10) AB is the diameter of the circle and C and D are any points on circumference then $m\angle C$ and $\angle D = ?$



- 1) $60^\circ, 80^\circ$ 2) $100^\circ, 75^\circ$ 3) $90^\circ, 90^\circ$ 4) $60^\circ, 60^\circ$
- 11) $\sqrt[4]{16 \times 625} = ?$
 1) 100 2) 2×25 3) 10 4) 4×5
- 12) Find the side of a square whose area and perimeter are same.
 1) 4 units 2) 2 units 3) 3 units 4) None of these
- 13) If the simple interest on certain sum is Rs. 810 for 6 years at the rate 9 p.c.p.a. Find the principal.
 1) Rs. 1000 2) Rs.1500 3) Rs. 1200 4) Rs.1600
- 14) $8 \times 10^0 + 0 \times 10^3 + 5 \times 10^1 + 9 \times 10^4 + 1 \times 10^2 = ?$
 1) 91058 2) 910580 3) 90158 4) 90185
- 15) Write given information in mathematical statement.
 "Two subtracted from 5 times a number gives 12."
 1) $a - 2 = 12$ 2) $5a - 2 = 12$ 3) $2a - 5 = 12$ 4) None of these
- 16) G.C.D. and L.C.M. of two numbers are 8 and 1768 respectively. One of the number is 104 then other number is
 1) 148 2) 144 3) 152 4) 136
- 17) Altitudes seg AD and seg BC of $\triangle ABC$ intersect at point 'O'. What type of quadrilateral is EODC ?
 1) Cyclic 2) rectangle 3) Square 4) trapezium
- 18) Select correct set of numbers which are in proportion.
 1) 11, 22, 33, 44 2) 33, 22, 66, 44 3) 11, 44, 22, 33 4) 33, 66, 44, 22
- 19) Area of one face of a cube is 36 cm^2 then what is volume of the cube ?
 1) 216 cm^2 2) 36 cm^3 3) 216 cm^3 4) None of these
- 20) $\left(\frac{11}{17}\right)^{-5} \div \left(\frac{11}{17}\right)^{-5} = \dots\dots\dots$
 1) 1 2) $\left(\frac{11}{17}\right)^{-10}$ 3) 0 4) $\left(\frac{11}{17}\right)^1$
- 21) Which of the following number is irrational number ?
 1) $\frac{22}{7}$ 2) 3.14 3) π 4) $3.\overline{14}$
- 22) $\frac{a}{8} + \frac{a}{16} = -3$ then find the value of 'a'.
 1) -16 2) 16 3) $\frac{1}{16}$ 4) $\frac{1}{-16}$

23) In the $\triangle ABC$ point D is midpoint of side AB and point E is midpoint of seg CD. Then

$$\frac{A(\triangle ABC)}{A(\triangle DBE)} = \dots\dots\dots$$

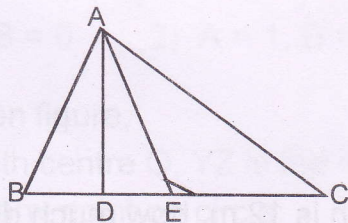


- 1) 4 : 1 2) 1 : 4 3) 8 : 3 4) 1 : 8

24) $\frac{(7.89)^2 - (0.11)^2}{7.89 - 0.11} = ?$

- 1) -8 2) 8 3) 7.78 4) $(7.78)^2$

25) $\angle AEC$ is exterior angle for triangles



- 1) $\triangle ABC$ 2) $\triangle ABD$ व $\triangle DAC$ 3) $\triangle ABE$ व $\triangle DAE$ 4) $\triangle ADC$

26) $9x^2 - 30xy + 25y^2$ is square expansion of

- 1) $(3x + 5y)$ 2) $(3x - 5y)$ 3) $(9x + 5y)$ 4) $(3x - 25y)$

27) 25% of 36 = y% of 45 then y% = ?

- 1) 20% 2) 25% 3) 10% 4) 15%

28) Which of the following statement is false about adjacent angles ?

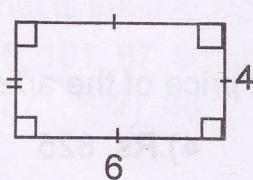
- 1) They have common vertex.
 2) Adjacent angles have a common side.
 3) Their interiors are same.
 4) Their interiors are different.

29) Write missing term in the product

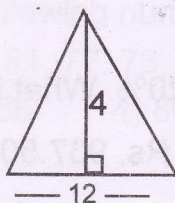
$$(2x - 3)(5x + 2) = 10x^2 \dots\dots\dots -6$$

- 1) -19x 2) +19x 3) 11x 4) -11x

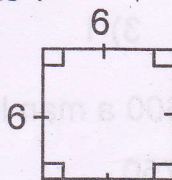
30) Which of the given figures have equal areas ?



(a)



(b)



(c)

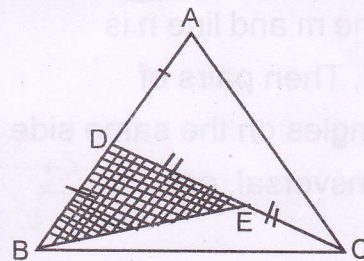
- 1) a, b 2) b, c 3) c, a 4) None of these.

31) $\frac{100}{6}$ can be written as

- 1) $16.\overline{6}$ 2) $160.\overline{6}$ 3) $1.\overline{66}$ 4) $16.\overline{66}$

23) In the $\triangle ABC$ point D is midpoint of side AB and point E is midpoint of seg CD. Then

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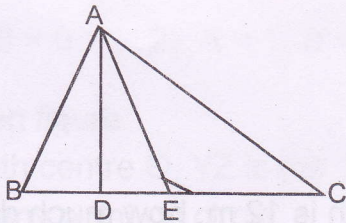


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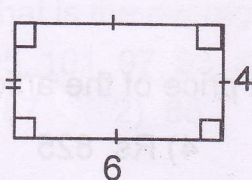
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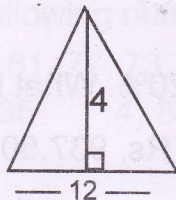
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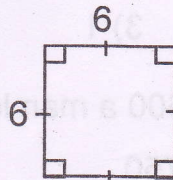
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(a)



(b)



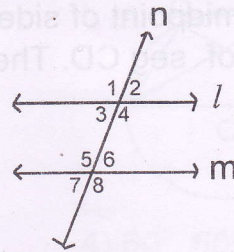
(c)

- 1) a, b 2) b, c 3) c, a 4) None of these.

31) $\frac{100}{6}$ can be written as

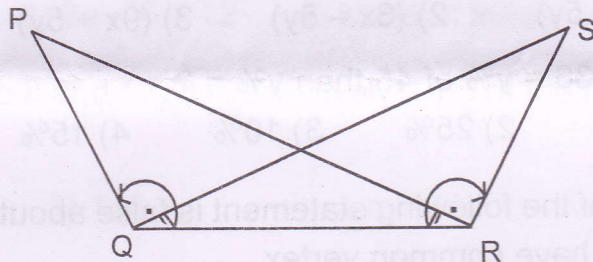
- 1) $16.\overline{6}$ 2) $160.\overline{6}$ 3) $1.\overline{66}$ 4) $16.\overline{66}$

- 32) Line l || line m and line n is transversal, Then pairs of interior angles on the same side of the transversal, are



- 1) 3, 4; 5, 6 2) 4, 5; 3, 6 3) 4, 6; 5, 3 4) 1, 5; 2, 6
- 33) Subtract. $(25mn - 15ab) - (12ab + 7mn)$
 1) $18mn - 27ab$ 2) $32mn - 3ab$ 3) $-18mn + 3ab$ 4) $18mn + 27ab$
- 34) The angles of a triangle are in the ratio 2 : 3 : 4 then find the measure of the greatest angle.
 1) 80° 2) 100° 3) 90° 4) 60°
- 35) If $a + b = 7$ and $ab = 5$ the value of $a^2 + b^2 = \dots\dots\dots$
 1) 42 2) 49 3) 35 4) 39
- 36) Length of a rectangular garden is 25 m and breadth is 12 m, how much distance will be covered in 4 rounds of the garden.
 1) 74 m 2) 312 m 3) 108 m 4) 296 m

- 37) In the given figure,
 $\angle PQR \cong \angle SRQ$,
 $\angle PRQ \cong \angle SQR$,
 By which test $\triangle PQR \cong \triangle SRQ$



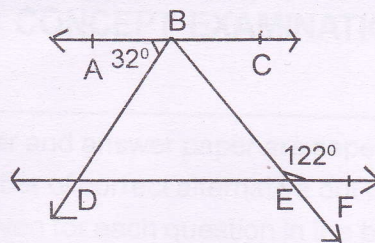
- 1) A-A-A test 2) S-S-S test 3) S-A-A test 4) A-S-A test
- 38) If $a = 4$, $b = -4$ then write the alternative in which give two expression have the value.
 1) $a + b$; $a^3 + b^3$ 2) $a + b$; $a - b$ 3) $a^2 + b^2$; $a^2 - b^2$ 4) $(a - b)^2$; $(a + b)^2$
- 39) Simplify.
 $3 \frac{1}{12} - \left[1 \frac{3}{4} + \left\{ 2 \frac{1}{2} - \left(1 \frac{1}{2} - \frac{1}{3} \right) \right\} \right]$
 1) $\frac{1}{2}$ 2) 2 3) 1 4) 0
- 40) By selling an article for Rs. 600 a man loses 20%. What is cost price of the article ?
 1) Rs. 800 2) Rs. 750 3) Rs. 937.50 4) Rs. 825
- 41) Add the following .
 $18.0006 + 14.005 + 12.34 = ?$
 1) 45.3356 2) 44.3456 3) 44.3356 4) 44.4356
- 42) $(2x - 5)^2 = ?$
 1) $4x^2 - 10x + 25$ 2) $4x^2 - 20x + 25$
 3) $4x^2 - 10x - 25$ 4) $4x^2 - 20x - 25$

- 43) In the given figure,
line AB \parallel line DE.

$$\angle ABD = 32^\circ,$$

$$\angle BEF = 122^\circ$$

then $\angle DBE = \dots\dots\dots$



- 1) 120° 2) 90° 3) 89° 4) 58°

- 44) Solve the equation and find the value of y

$$6 = 3 + \frac{y}{8}$$

- 1) 11 2) $\frac{3}{8}$ 3) 16 4) 24

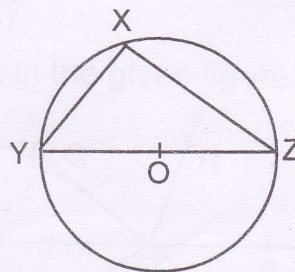
- 45) Find digits A and B if the number 567A38B is divisible by 44.

- 1) A = 1, B = 0 2) A = 1, B = 2 3) A = 0, B = 4 4) A = 2, B = 2

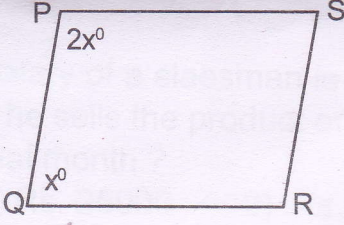
- 46) In the given figure,
a circle with centre O, YZ is the diameter
and X is any point on circle.

If YZ = 26 cm., XY = 10 cm.

then $A(\triangle XYZ) = \dots\dots\dots$



- 1) 120 cm^2 2) 240 cm^2 3) 130 cm^2 4) 260 cm^2

- 47)  In the parallelogram PQRS
 $\angle P = 2x^\circ$, $\angle Q = x^\circ$
then find $m\angle P$ and
 $m\angle Q$ respectively.

- 1) $65^\circ, 130^\circ$ 2) $120^\circ, 60^\circ$ 3) $150^\circ, 50^\circ$ 4) $50^\circ, 130^\circ$

- 48) How many two digit numbers contain digit 6 only once ?

- 1) 20 2) 17 3) 18 4) 19

- 49) How many integers are there between $\sqrt{20}$ and $\sqrt{200}$

- 1) 10 2) 7 3) 5 4) None of these.

- 50) What is the average of following numbers.

105, 101, 97, 93, 89, 85, 81, 77, 73, 69

- 1) 87 2) 88 3) 85 4) 86

