

# Dream Scholars League 2014-15

## Class VII: Mathematics Scholarship Exam: Sample Question Paper

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### General Instructions:

- There are 60 questions. All questions are compulsory.
- Shade the right answer in the OMR sheet provided      A)  B)  C)  D)
- Time allotted is 60 minutes. Total Marks = 60 Marks

Q.1)  $256 = \underline{\hspace{2cm}}$ .

- A)  $2^9$                       B)  $2^6$                       C)  $2^7$                       D)  $2^8$

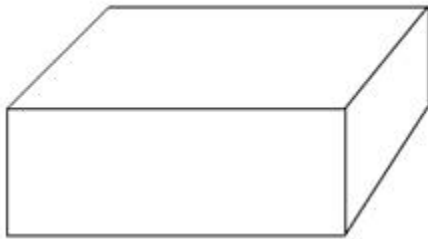
Q.3)  $(-10)^3 = \underline{\hspace{2cm}}$ .

- A) -1000                      B) 1000                      C) -100                      D) 100

Q.4)  $(-2)^3 \times (-10)^3 = \underline{\hspace{2cm}}$ .

- A) -800                      B) 800                      C) 8000                      D) -1000

Q.5) In the figure below, the name of the three-dimensional solid shape is \_\_\_\_\_.



- A) Sphere                      B) Cone                      C) Cuboid                      D) Cube

Q.6) A line segment is symmetrical about its \_\_\_\_\_.

- A) Angle bisector                      B) Perpendicular bisector  
C) Starting point                      D) End point

Q.7)  $(-4)^4 = \underline{\hspace{2cm}}$ .

- A) 512                      B) 224                      C) -256                      D) 256

Q.8) If  $m = 2$ , then the value of  $m - 2$  is \_\_\_\_\_.

- A) 0                      B) 2                      C) 1                      D) 4

Q.9) The circumference of a circle of radius 10.5 cm is \_\_\_\_\_.

- A) 61 cm                      B) 62 cm                      C) 60 cm                      D) 66 cm

Q.10) The steps to be followed to construct a line parallel to a given line through a point not on it are as follows:

- Draw a line 'l' and mark a point P on it and a point R outside.
- With P as centre and a convenient radius draw an arc to cut l at Q and PR at S.
- Join P to R.

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- (iv) With R as centre and radius PQ drawn an arc AB to cut PR at C.  
 (v) Using compasses measure the arc length QS and with C as centre and the same arc length cut the arc AB at H.  
 (vi) Now join R to H to draw a line m.  
 The proper order of steps for construction is \_\_\_\_.

- A) iii, i, v, ii, iv, vi                      B) v, i, ii, iii, vi, iv  
 C) i, iii, ii, iv, v, vi                        D) i, iv, vi, iii, ii, v

Q.11) The additive inverse of  $\frac{5}{-8}$  is \_\_\_\_.

- A)  $\frac{5}{8}$     B)  $-\frac{5}{8}$     C)  $\frac{3}{8}$     D)  $\frac{-3}{8}$

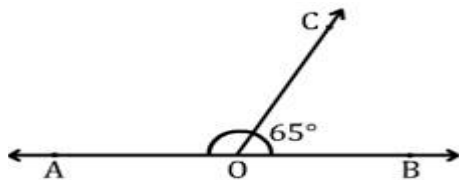
Q.12) The value of 36 % as in decimal form is \_\_\_\_.

- A) 0.36    B) 0.45    C) 0.46    D) 0.66

Q.13)  $\overline{CD} \cong \overline{EF}$  is read as \_\_\_\_.

- A) Line CD is congruent to line EF.                      B) Line segment CD is congruent to line segment EF.  
 C) Ray CD is congruent to ray EF.                      D) Line CD is parallel to line EF.

Q.14) In the figure below, AB is a straight line and  $\angle BOC = 65^\circ$ . The measure of  $\angle AOC$  is \_\_\_\_.



- A)  $145^\circ$     B)  $115^\circ$     C)  $125^\circ$     D)  $165^\circ$

Q.15) The number of children in 20 families of a locality is given below:

3, 1, 3, 2, 2, 2, 0, 3, 4, 2, 1, 3, 2, 4, 1, 2, 2, 3, 1, 3.

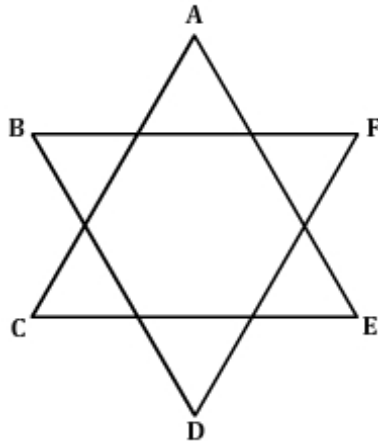
Which of the following frequency tables shows the correct data?

A)

Number of children	Tally marks	Number of families (Frequency)
0		1
1		4
2		7
3		6
4		2



Q.18) In the figure below,  $\angle A + \angle B + \angle C + \angle D + \angle E + \angle F = \underline{\hspace{2cm}}$ .



- A)  $90^\circ$                       B)  $270^\circ$                       C)  $180^\circ$                       D)  $360^\circ$

Q.19) If two line segments AB and CD are congruent, then it is represented symbolically as

- .  
 A)  $AB < CD$                       B)  $AB > CD$                       C)  $AB \sim CD$                       D)  $\overline{AB} \cong \overline{CD}$

Q.20) The value of  $\frac{9}{20}$  in percentage form is \_\_\_\_\_.

- A) 42 %                      B) 40 %                      C) 45 %                      D) 50 %

Q.21) The additive inverse of  $\frac{3}{5}$  is \_\_\_\_\_.

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

Q.22) Given a line AB, PQ perpendicular to AB and a point C on PQ such that C is at a distance of 5 cm away from AB. A line DE is drawn through C such that DE is parallel to AB. Given below are the steps of construction.

- (i) Draw a line AB.
- (ii) Join D to C and extend it to E.
- (iii) Mark a point C on PQ such that C is at a distance of 5 cm from AB.
- (iv) With C as centre and any convenient radius draw arcs on either sides of C such that they intersect PQ at R and S.
- (v) With R as centre and a convenient radius draw an arc.
- (vi) With S as centre and same radius draw another arc to intersect the previous arc at D.
- (vii) Draw a line PQ perpendicular to AB.

The proper order of steps for construction is \_\_\_\_\_.

- A) ii, i, vii, iii, iv, v, vi                      B) i, ii, v, vi, vii, iii, iv  
 C) iii, i, ii, iv, v, vi, vii                      D) i, vii, iii, iv, v, vi, ii

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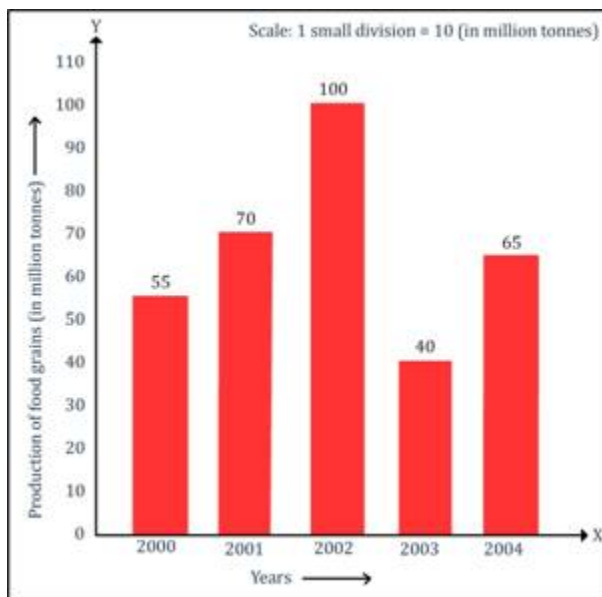
Q.23) The circumference of a circular disc of radius 21 cm is \_\_\_\_\_. (Use  $\pi = \frac{22}{7}$ )  
A) 128 cm                      B) 134 cm                      C) 130 cm                      D) 132 cm

Q.24) If  $a = 2$  and  $b = -2$ , then the value of  $a^2 + ab + b^2$  is \_\_\_\_\_.  
A) 8                              B) 6                              C) -4                              D) 4

Q.25)  $13 \times (-41) + 13 \times (-19) =$  \_\_\_\_\_.  
A) -785                      B) 780                      C) -780                      D) 765

Q.26) If the side of an equilateral triangle is 4.5 cm, then its perimeter is \_\_\_\_\_.  
A) 11.5 cm                      B) 15.3 cm                      C) 12.5 cm                      D) 13.5 cm

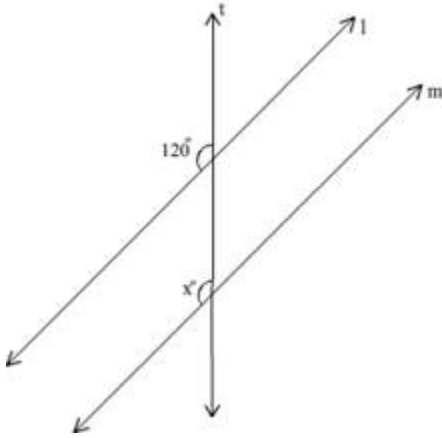
Q.27) Given below is a bar graph showing the production of food grains in an Indian state during five consecutive years.



The duration of annual production (in million tonnes) of food grains shown is \_\_\_\_\_.  
A) 2002 to 2004                      B) 2002 to 2006  
C) 2000 to 2004                      D) 2000 to 2002

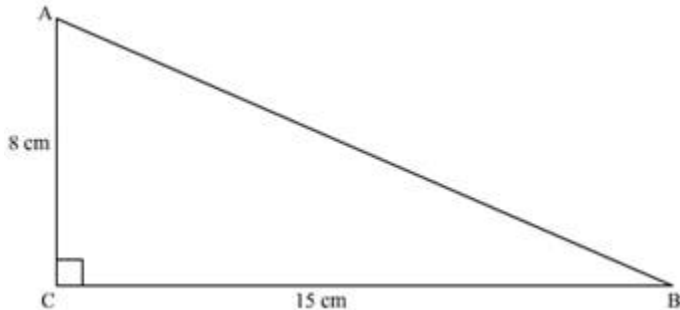
Q.28) If four-fifths of a number is greater than three-fourths of the number by 4, then the number is \_\_\_\_\_.  
A) 81                              B) 82                              C) 80                              D) 70

Q.29) In the figure below, if  $l \parallel m$  and  $t$  is the transversal intersecting them, then the value of  $x$  is \_\_\_\_.



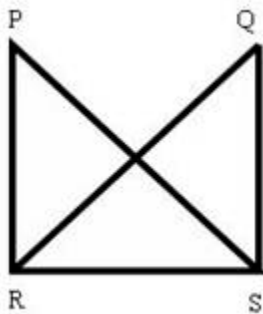
- A) 120                      B) 130                      C) 150                      D) 140

Q.30) In the figure below,  $\triangle ABC$  is right-angled at  $C$ . If  $AC = 8$  cm and  $BC = 15$  cm, then the length of  $AB$  is \_\_\_\_.



- A) 15 cm                      B) 19 cm                      C) 17 cm                      D) 18 cm

Q.31) In the figure below,  $PR = QS$  and  $PS = QR$ , which of the following statements is true?

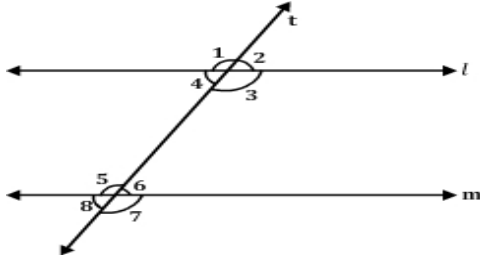




Q.38) The total monthly salary of 4 men and 2 women is Rs 46,000. If a woman earns Rs 500 more than a man, then the monthly salary of a woman is \_\_\_\_.

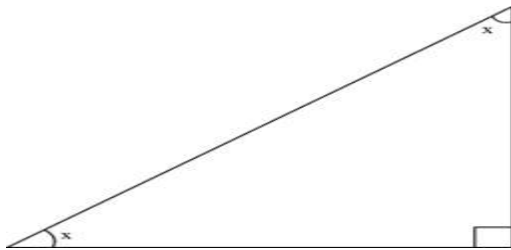
- A) Rs 6500                      B) Rs 7500                      C) Rs 8000                      D) Rs 9000

Q.39) In the figure below,  $l \parallel m$  and  $t$  is a transversal such that  $\angle 1 = 100^\circ$ , then the value of  $\angle 5 =$  \_\_\_\_.



- A)  $125^\circ$                       B)  $100^\circ$                       C)  $105^\circ$                       D)  $130^\circ$

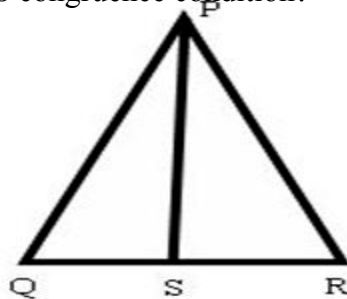
Q.40) In the figure below, the measure of angle  $x$  is \_\_\_\_.



- A)  $60^\circ$                       B)  $90^\circ$                       C)  $40^\circ$                       D)  $45^\circ$

Q.41) In the figure below,  $PQ = PR$ , so which of the following additional information is required to show that  $\triangle QPS \cong \triangle RPS$  by SAS congruence condition?

- A)  $\angle Q = \angle R$   
 B)  $\angle QPS = \angle RPS$   
 C)  $\angle PSQ = \angle PSR$   
 D)  $\angle P = \angle Q$



Q.42) A bag contains 50 paise, Rs 1 and Rs 2 coins in the ratio of 2 : 3 : 4, if the total value of the coins is Rs 24, then the number of Rs 2 coins in the bag is \_\_\_\_.

- A) 5                      B) 6                      C) 8                      D) 3



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Q.43) The value of  $\frac{11}{-13}$  as a rational number with a positive denominator is \_\_\_\_\_.

- A)  $\frac{-11}{13}$                       B)  $\frac{11}{13}$                       C)  $\frac{-9}{13}$                       D)  $\frac{9}{13}$

Q.44) The following are the steps for construction of a triangle ABC, in which AB = 5 cm, BC = 4.1 cm and CA = 6 cm.

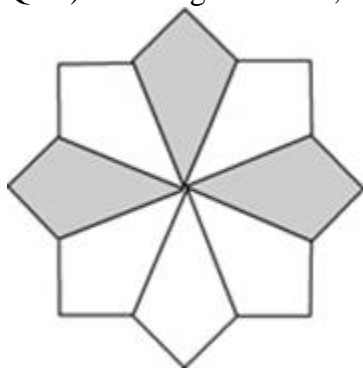
- (i) Join A and B, A and C.  
(ii) Draw a line segment BC of length 4.1 cm.  
(iii) With B as centre and radius 5 cm draw an arc.  
(iv) With C as centre and radius 6 cm draw an arc to cut the previous arc at A.  
The proper order of steps for construction is \_\_\_\_\_.

- A) iv, ii, i, iii                      B) iii, i, iv, ii                      C) ii, iii, iv, I                      D) ii, i, iii, iv

Q.45) Ramu deposits Rs 3,500 in his bank account and withdraws Rs 2,450 from it, the next day. The balance in Ramu's account after the withdrawal is \_\_\_\_\_.

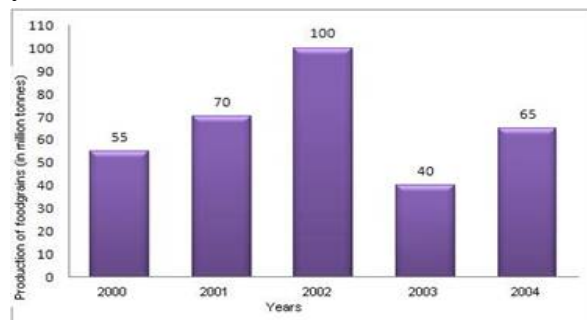
- A) Rs 1150                      B) Rs 1050                      C) Rs 1250                      D) Rs 950

Q.46) In the figure below, the shaded portion represents \_\_\_\_\_ part of the figure.



- A)  $\frac{5}{8}$ <sup>th</sup>                      B)  $\frac{2}{7}$ <sup>th</sup>                      C)  $\frac{3}{8}$ <sup>th</sup>                      D)  $\frac{3}{5}$ <sup>th</sup>

Q.47) Given below is a graph showing the production of food grains in an Indian state during five consecutive years.



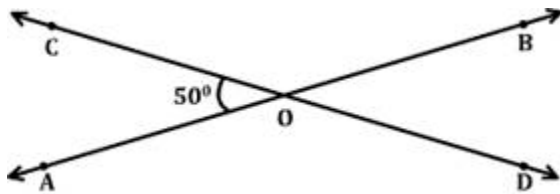
The ratio between the maximum production and the minimum production during the given period is \_\_\_\_.

- A) 5 : 1                      B) 1 : 2                      C) 5 : 3                      D) 5 : 2

Q.48) If a number, when added to two-thirds of itself, gives 55, then the number is \_\_\_\_.

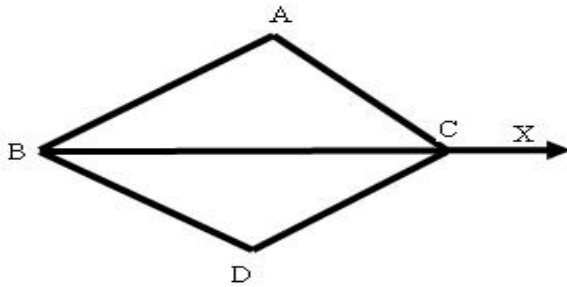
- A) 30                      B) 33                      C) 32                      D) 35

Q.49) In the figure below, two lines AB and CD intersect at a point. If  $\angle AOC = 50^\circ$ ,  $\angle BOC =$  \_\_\_\_\_.



- A)  $120^\circ$                       B)  $140^\circ$                       C)  $115^\circ$                       D)  $130^\circ$

Q.50) In the figure below, BX is the bisector of  $\angle B$  as well as  $\angle C$ , so the additional information required to establish that  $\triangle ABC \cong \triangle DBC$  by ASA congruence condition is \_\_\_\_.



- A)  $AC = DB$                       B)  $AD = DC$                       C)  $BC = BC$                       D)  $BD = DC$

Q.51) A number is increased by 10% and then the increased number is decreased by 10%. The net decrease is \_\_\_\_.

- A) 2                      B) 3                      C) 4                      D) 1

Q.52) The following are the steps for construction of an Isosceles triangle PQR, with  $PQ = PR = 5$  cm and  $\angle P = 110^\circ$ .

- (i) From P draw a ray PA making an angle of  $110^\circ$  with PQ.
- (ii) With P as centre and radius 5 cm draw an arc to cut the ray PA at R.
- (iii) Draw a line segment PQ of length 5 cm.
- (iv) Join Q and R.

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Then the correct sequence of steps are\_\_\_\_\_.

- A) i, ii, iii, iv                      B) iv, iii, ii, i                      C) i, iii, ii, iv                      D) iii, i, ii, iv

Q.53)  $(-36) \div (-9) =$  \_\_\_\_\_.

- A) -4                      B) 4                      C) -9                      D) 9

Q.54) The value of  $2\frac{2}{3} + 4\frac{1}{2}$  is \_\_\_\_\_.

- A)  $\frac{37}{2}$                       B)  $\frac{35}{6}$                       C)  $\frac{41}{6}$                       D)  $\frac{43}{6}$

Q.55) The heights (in cm) of 16 girls in a class are given below:  
154, 150, 152, 154, 154, 150, 148, 152, 152, 152, 154, 150, 152, 154, 152, 152  
Which of the following frequency tables shows the correct data?

A)

Height (in cm)	Tally marks	Number of girls (Frequency)
148		1
150		1
152		7
154		5

B)

Height (in cm)	Tally marks	Number of girls (Frequency)
148		1
150		3
152		7
154		5

C)

Height (in cm)	Tally marks	Number of girls (Frequency)
148		1
150		3
152		7
154		5

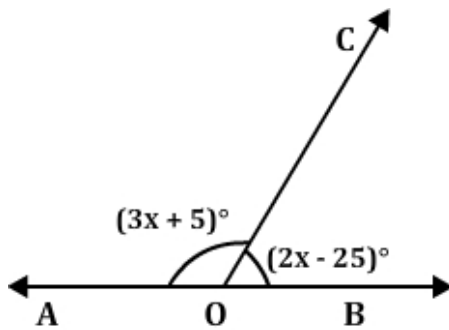
D)

Height (in cm)	Tally marks	Number of girls (Frequency)
148		1
150		3
152		7
154		5

Q.56) If  $n + 5 = 19$ , then the value of n is \_\_\_\_\_.

- A) 8                                      B) 14                                      C) 12                                      D) 10

Q.57) In the figure below, AOB is a straight line, then the value of x is \_\_\_\_\_.



- A) 50                                      B) 40                                      C) 30                                      D) 20

Q.58) If two line segments AB and CD are congruent, then it is represented symbolically as \_\_\_\_\_.

- A)  $\overline{AB} < \overline{CD}$   
 B)  $\overline{AB} > \overline{CD}$   
 C)  $\overline{AB} \sim \overline{CD}$   
 D)  $\overline{AB} \cong \overline{CD}$

Q.59) The diameter of the wheel of a car is 70 cm. The number of revolutions will it make to travel 99 km is \_\_\_\_\_.

- A) 45500                                      B) 42000                                      C) 45000                                      D) 44000

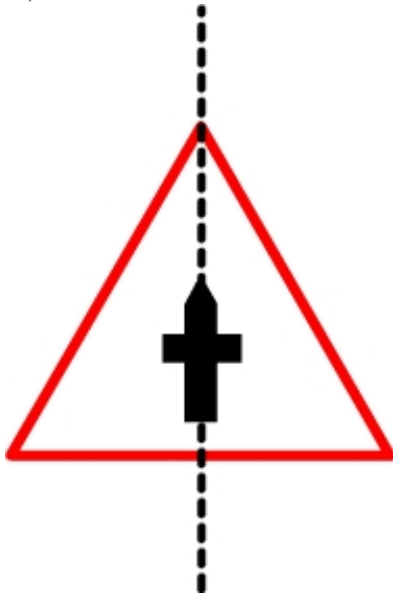
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Q.60) Which of the following figures shows the line symmetry of the given figure?



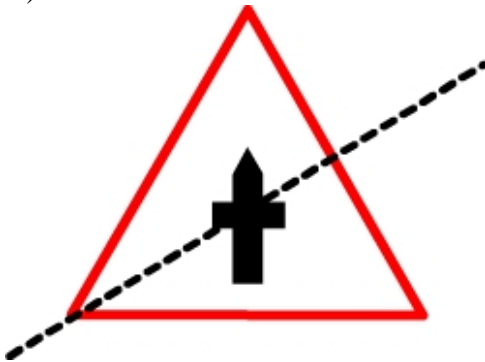
A)



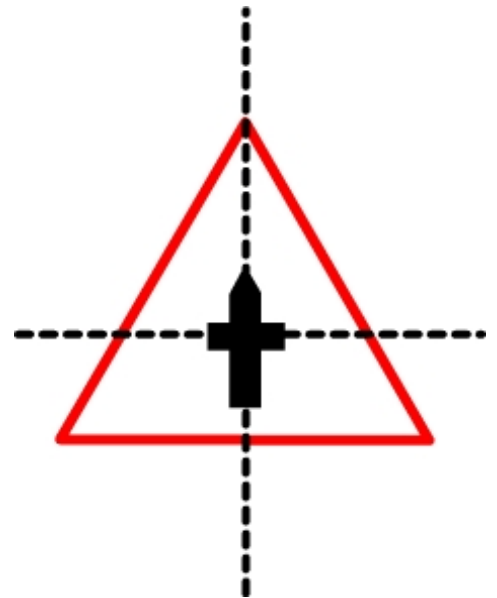
B)



C)



D)



D)

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