

KENDRIYA VIDYALAYA IIT CAMPUS

CLASS - VII

REVISION QUESTIONS FOR HOLIDAY HOMEWORK

CHAPTER - 1 to 9 MATHEMATICS Date: 26.9.2017

1. Find each of the following products:

(a)  $(-19) \times (-6) \times (-5)$

(b)  $(-13) \times (-12) \times (10)$

2. Find the products using suitable properties:

(a)  $(-7) \times (-9) + (-7)$

(b)  $102 \times (-45)$

3. A certain freezing process requires that room temperature be lowered from  $35^{\circ}\text{C}$  at the rate of  $9^{\circ}\text{C}$  every hour. What is the room temperature 10 hours after the process begins?

4. Arrange the following numbers on a number line and write them in ascending as well as in descending order:  $7, -5, 4, 0, -4$ .

5. Verify that  $a + (-b) = a - b$  for the following values of  $a$  and  $b$ .

(i)  $a = -56, b = 73$

(ii)  $a = 125, b = -101$

(iii)  $a = -133, b = 82$

(iv)  $a = 113, b = 82$

Date: 27.9.2017

6. (a) Write a pair of negative integers whose differences gives 6.

(b) Write a negative integer and a positive and a positive integer whose sum is  $-15$ .

(c) Write a negative integer and a positive integer whose difference is  $-13$ .

7. A rectangular sheet of paper is  $10\frac{1}{2}$  cm long and  $10\frac{2}{3}$  cm wide. Find its perimeter.

8. Ram purchased  $3\frac{1}{2}$  kg apples and  $4\frac{3}{4}$  kg mangoes. What is the total weight of fruits purchased by her?

9. A water tank contains  $12\frac{1}{2}$  litres of water. Two-fifths of it was consumed. How much water was left in the tank?

10. Find : (a)  $8\frac{1}{3}$  of  $\frac{1}{3}$  of (b)  $\frac{1}{3}$  of (c) 35 (ii) 105

Date: 28.9.2017

11. Multiply and express as mixed fraction:

(i)  $3 \times 6\frac{3}{4}$

(ii)  $9 \times 2\frac{1}{4}$

12. Each side of a square field is  $10\frac{1}{2}$  m. Find the area of the field.

13. The length of a rectangular field is 2 times more than its breadth. If measure of its breadth is  $3\frac{4}{5}$  m, find its area.

14. Multiply and reduce to lowest form:

(i)  $\frac{3}{8} \times \frac{4}{5}$

(ii)  $\frac{5}{9} \times \frac{5}{3}$

Date: 29.9.2017

15. If the fraction obtained is improper then convert it into mixed fraction.

(i)  $6\frac{3}{5} \times \frac{6}{4}$

(ii)  $\frac{3}{4} \times 5\frac{2}{3}$

16. A vehicle uses  $2\frac{1}{3}$  litres of petrol in 1 hour. How many litres of petrol will be required to run the vehicle for  $7\frac{1}{2}$  hours?

17. A car runs 15 km using 1 litre of petrol. How much distance will it cover using  $3\frac{2}{3}$  litres of petrol?

18. Find : (a)  $4 \div \frac{8}{4}$  (b)  $3 \div 2\frac{2}{3}$

19. Find reciprocal of each of the following fractions and express in mixed fraction if possible.

(a)  $\frac{8}{15}$  (b)  $\frac{3}{5}$

19. Find : (a)  $\frac{3}{7} \div \frac{7}{8}$  (b)  $\frac{14}{51} \div \frac{48}{17}$

Date: 30.9.2017

20. Find : (a)  $0.75 \div 5$  (b)  $2.44 \div 4$  (c)  $14.56 \div 7$  (d)  $53.5 \div 10$   
(e)  $345.7 \div 10$

21. Find : (a)  $53.5 \div 10$  (b)  $345.7 \div 10$

22. A cricketer scores the following runs in 10 innings. 50, 35, 40, 90, 50, 60, 70, 85, 90, 85. Find mean score.

23. The enrolment of a school during six consecutive years was as follows:

2155, 3710, 2750, 1029, 3540, 2830

Find mean enrolment of the school for this period.

24. Find the mode of the following data:

14, 25, 14, 28, 18, 17, 18, 14, 23, 22, 14, 18, 18

Are there two modes if yes what are the two modes?

25. Solve the following equations by a trial and error method:

i)  $2x + 4 = 3x$

ii)  $4b = -12$

iii)  $-3m = -3$

iv)  $12x = -72$

Date: 1.10.2017

26. Convert the following equations in statement forms:

i)  $5P = 20$

ii)  $7q - 8 = -1$

iii)  $5 - 2z = 1$

iv)  $\frac{y}{4} + 9 = 5$

27. Solve the following equations:

i)  $9u = 81$

ii)  $\frac{4m}{5} = 8$

iii)  $4s = -12$

iv)  $3s + \frac{5}{2} = \frac{17}{2}$

v)  $6r - \frac{3}{2} = \frac{9}{2}$

28. Solve the following equations. Also check the answer in each case.

i)  $6(p+2) = -18$

ii)  $3(1+x) = 8$



29. Find the complement of the following angles :

i)  $27^\circ$

ii)  $39^\circ$

iii)  $46^\circ$

iv)  $58^\circ$

30. Find the supplement of the following angles :

i)  $136^\circ$

ii)  $118^\circ$

iii)  $156^\circ$

iv)  $125^\circ$

31. The difference in the measure of two complementary angles is  $20^\circ$ . Find the measure of angles.

Date: 2.10.2017

32. Draw a  $\triangle DEF$  where  $\angle E = 90^\circ$ . Draw medians  $DP$  and  $EQ$  from  $D$  and  $E$  respectively to the opposite sides. Let  $DP$  and  $EQ$  intersect at  $G$ . Join  $FG$  and extend it to meet  $DE$  at  $R$ . Is  $DR = RE$ ? Is  $FR$  a median of  $\triangle DEF$ ?

33. One of the exterior angles of a triangle is  $80^\circ$ , and the interior opposite angles are in the ratio  $3:5$ . Find these angles.

~~34. One of the exterior angles of a triangle is  $80^\circ$ .~~

34. An exterior angle of a triangle is  $100^\circ$  and one of the two interior opposite angles is  $30^\circ$ . Find the other angle.

35. In each of the following determine whether a triangle with these three sides is possible or not :-

i)  $7\text{ cm}, 11\text{ cm}, 30\text{ cm}$

ii)  $5\text{ cm}, 6\text{ cm}, 4.5\text{ cm}$

36.  $\triangle PQR$  is isosceles with  $PQ = PR$ . If  $\angle R = 45^\circ$ , find the measures of the other two angles.
37. Determine which of the following can be the sides of a right triangle?
- 8 cm, 15 cm, 17 cm
  - 6 cm, 4.5 cm, 7.5 cm
  - 12 cm, 35 cm, 37 cm
  - 5 cm, 12 cm, 13 cm
38. In  $\triangle ABC$ ,  $AD$  is the altitude from  $A$  such that  $AD = 12$  cm,  $BD = 9$  cm and  $DC = 16$  cm. Examine if  $\triangle ABC$  is right-angled at  $A$ .
39. A man goes 10 m due south and then 24 m due east. Find the distance from the starting point.
40. If  $\triangle ABC$  and  $\triangle PQR$  are congruent under the correspondence  $ABC \leftrightarrow PQR$   
Write the parts of  $\triangle ABC$  that correspond to
- $\overline{PQ}$
  - $\angle Q$
  - $\overline{RP}$
41.  $\triangle PQR$  and  $\triangle TQR$  (see fig.) are on the same base  $QR$ . Also  $PQ = TR$  and  $PR = TQ$ . Which of the following statements is true?
- $\triangle PQR \cong \triangle TQR$
  - $\triangle PQR \cong \triangle TRQ$
  - $\triangle PQR \cong \triangle RQT$

42. In each of the following determine whether a triangle with these three sides is possible or not:-

i) 7cm, 11cm, 30cm

ii) 10.2cm, 5.8cm, and 4.5cm

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43. In fig,  $AB = AC$  and  $AD$  is the bisector of  $\angle BAC$ .

(i) State three pairs of equal parts in triangles  $ADB$  and  $ADC$ .

ii) Is  $\angle AOB \cong \angle AOC$ ?  
Give reasons

iii) Is  $\angle B = \angle C$ ? Give reasons

44. Find the ratio of:

i) 25 cm to 10 m

ii) 200 ml to 5 l

iii) 15 paise to ₹ 1.75

45. Radha spent  $\frac{5}{12}$  of her salary on books. Rinku spent  $\frac{4}{9}$  of her salary on books. Who spent more on books?

46. 6 books cost ₹ 90. What would be the cost of 10 such books?

Date: 4.10.2017

47. Convert given decimal to percentage:

i) 0.2

ii) 3.58

iii) 0.225

48. Prakash had ₹ 2000 with him. He spent ₹ 500 out of it. What percentage of money he spent?

49. Write the numerator of each of the following rational numbers:-

i)  $-\frac{27}{53}$

ii)  $\frac{99}{-1000}$

iii)  $\frac{-67}{-167}$

Date: 5.10.2017

50. Write four more rational numbers in each of the following pattern:-

i)  $\frac{-1}{3}, \frac{-2}{6}, \frac{3}{9}, \frac{4}{12}, \dots$

ii)  $\frac{-3}{4}, \frac{-6}{8}, \frac{9}{12}, \dots$

51. Express in standard form:-

i)  $\frac{-15}{9}$

ii)  $\frac{-132}{-330}$

iii)  $\frac{240}{-840}$

52. Find the value of:-

i)  $\frac{5}{18} + \frac{3}{13}$

ii)  $\left[ \frac{-9}{13} \right] + \frac{17}{13}$

53. Find the additive inverse of the following:-

i)  $\frac{-4}{7}$

ii)  $\frac{2}{3}$

iii)  $-\frac{3}{9}$