

REVISION QUESTIONS(2017-18)

(CLASS- VI)

MATHEMATICS

AVERAGE

1) Find out the average of the following:-

a) 12.5, 16.8, 3.9, 7.2 b) 10cm, 1m, 1m 30cm, 1m5cm c) 30secs, 12mins, 1hr 5mins, 65secs

2) The average of 22 boys of a class is 85 marks in math's test while the average score of 18 girls in same test is 87. Find out the total score of boys and girls.

3) The height of all the players in a team adds up to 19m 58cm. If the average height of the players is 1m 78cm, find how many players are there in the team.

4) A basket contains 100 balls. There are 25 red balls, 55 green balls and 20 blue balls. If the cost per red, green and blue ball is Rs. 8.50, Rs. 9 and Rs 21.50 respectively. Find the total cost of the balls in the basket.

5) On an average five basket of mangoes have 25 mangoes in each. If the first four baskets have 28, 20, 26 and 24 mangoes respectively, how many mangoes are there in the fifth basket.

6) The average height of 4 boys in a team is 52.2 cm when a new boy joins the team the average height of 5 boys become 53 cm. What is the height of the fifth boy.

PERCENTAGE

1) Express the following as percentages:-

a) $1\frac{2}{5}$ b) 3.07 c) 0.005 d) $\frac{34}{200}$

2) Express the following percentages as i) common fractions ii) decimals

a) 13.6% b) $33\frac{1}{3}\%$ c) 1.3109% d) $8\frac{3}{4}\%$

3) Find the value of the following :-

a) 15% of 15 b) 1.2% of 1L c) $13\frac{1}{3}\%$ of 90km d) 20% of 1hr 30mins

4) A boy's height increases from 160 cm to 180 cm. By what percent did his height increase.

5) There are 460 tables and 580 chairs in an office. What is the percentage of tables and chairs in the office.

PROFIT AND LOSS

- 1) Find out the profit and loss for the following. Also, find their profit% and loss%.
 - a) C.P.= Rs. 2800, S.P.= Rs. 3200
 - b) C.P.= Rs. 1210.18, S.P.= Rs. 1011.28
 - c) C.P.= Rs.1900, S.P.= Rs.2002
 - d) C.P.= Rs.5128, S.P.= Rs.4312
- 2) A fruit seller buys bananas at Rs. 10 a dozen and sells them at Rs. 3 a pair. Find his gain per cent.
- 3) A walkman is sold at Rs. 5710 incurring a loss of Rs. 88. Find out the loss per cent. At what price should it have been sold to earn a profit of Rs. 100.
- 4) Mukesh bought a T.V. set at Rs. 13,100 whereas Ritam bought the same T.V. set at Rs. 12,000. They both sold it at a profit of Rs. 900 and Rs. 1200 respectively. Find out the profit per cent. Who earns a better profit and by how much.

PRACTICAL GEOMETRY

- 1) Draw a circle of radius 3.5 cm (using ruler and compasses)
- 2) Construct a line segment of length 9.1 cm.
- 3) Given PQ of length 4.1cm. Construct a line segment AB such that the length of AB is twice that of PQ.
- 4) Draw any line segment XY. Without measuring XY, construct a copy of XY.
- 5) Draw a line segment of length 7.1 cm. Construct its perpendicular bisector.
- 6) Construct a line perpendicular to the line segment of length 6.9 cm through:
 - a) a point on the line
 - b) a point not on the line
- 7) Draw a line segment of length 10.1 cm and divide it into four equal parts.
- 8) Construct a circle with PQ of length 3.5 cm as diameter using compasses and ruler only.
- 9) Draw an angle of 151° and divide it into four equal parts using compasses and ruler only.
- 10) Draw an angle of 47° and construct its axis of symmetry using compasses and ruler only.
- 11) Draw an angle of 55° and construct its copy using compasses and ruler only.
- 12) Draw an angle of 111° and construct its copy using compasses and ruler only.
- 13) Construct the following angles:

- a) 30° b) 45° c) 90° d) 75°

14) Construct the following angles:

- a) 105° b) 150° c) 135° d) 165°

15) With the same centre draw two circles of radii 4cm and 5.7cm.

MENSURATION

1) Find the area and perimeter of the following rectangles of:-

- a) length= 32cm, breadth= 18cm b) length= 1m 15cm, breadth= 80cm

2) Find the area and perimeter of the following squares of side:-

- a) 25cm b) 17m

3) Find the side and area of a square field of perimeter 272 cm. Also, find the cost of cultivating the field at the rate of Rs. 40 per m^2 .

4) The length and breadth of a rectangular field are in the ratio 5 : 3. If the perimeter of the field is 144 m, find the dimensions of the field. Also, find the cost of reaping the field at the rate of Rs. 72 per m^2 .

5) The perimeter of a square field of side 21 m is equal to the perimeter of a rectangular field of length 30m. Calculate the breadth of the field.

6) The cost of fencing a square field at the rate of 150 per m is Rs 75600. Calculate the cost of cultivating the field at the rate of 150 per m^2 .

7) The cost of cultivating a rectangular field of width 30 m at the rate of Rs 64 per m^2 is Rs. 1286400. Calculate the length of the field.

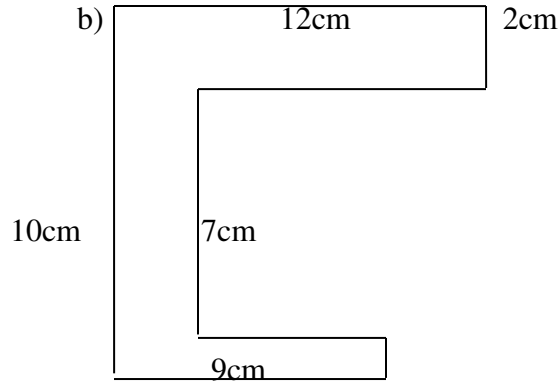
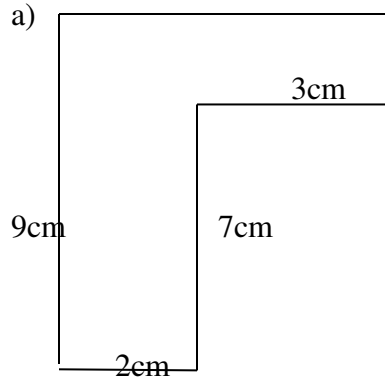
8) The dimensions of a wall is 2m 15cm and 80cm. Find the number of bricks required to build the wall, if each brick measures 8 cm by 5 cm.

9) How many tiles of length 12cm and width 5cm are required to cover the floor of a room of length 144cm and breadth 100cm.

10) A square carpet of side 4.5m is to be laid on the floor of a rectangular room of length 9m by 3.5m. Calculate the non-carpeted area.

11) The dimensions of the floor of a room are 25m by 16m. It has to be covered by a carpet of width 80 cm. Calculate the cost of carpeting the floor at the rate of Rs 250 per m.

12) Calculate the area of the following figures:-



ALGEBRAIC EXPRESSION

1) Write the following using numbers, literals and signs of basic operations:-

- One-third of the sum of x and y
- 5 less than the quotient of x and y
- 7 taken away from the sum of x and y .
- Thrice x added to y squared.

2) Write the following in exponential form:-

- $2 \times a \times a \times 3 \times b$
- $a \times a \times a \times b \times b$
- $2 \times a \times x \times x \times y$

3) Write the following in product form:-

- $2a^2bx^3$
- $6xyz^3$
- x^2yz^2l
- $6a^3b^2x$

4) If $a = -1, b = 2, c = 3$, then find the value of:-

- $3a - 2b + 4c$
- $a^2 + b^2 + c^2$
- $a^2 + b^2 - 2c^2$

5) Add the following algebraic expression:-

- $5x + 7y - 6z, 4y + 3x, 9x + 2z - 9y$
- $4x^3 - 5x^2 + 2x - 1, 2x - 5x^2 - 2x^3 + 1$

6) Subtract:-

- $a - b + 2c$ from $2c - a$
- $x^3 - 2x^2 + 6xy^2 + 5$ from $-4x^2 - 4xy^2 - 6x^3$

7) Simplify:-

a) $6a - 3b + 7c - 5d + 1 - 3a + 5b - 9c + 8 + 2a - 5d$

b) $x - 6y + 2z - 7 + 7x - y + 5z - 2$

8) Subtract the sum of $2x + 3y - 5$ and $3x + 5y$ from the sum of $9x + 3y - 8$ and $-2x + 4y - 8$

9) By how much does 1 exceed $3a - 5b + 8$.

10) Write all the terms of the following algebraic expressions:-

a) $x^2 - 2x + 3y - 8$ b) $2a - 3b + 4c - 1$ c) $-2ab + 3a^2b - 2ab^2 - 5$

11) Write the numerical co-efficient of:-

a) $-6x^2$ b) $2a^2y$ c) $-xy$ d) $-x$

12) Write the co-efficient of:-

a) xy in $8x^2yz$ b) x^2 in $-x^2$ c) $6a$ in $-18abc$ d) b^2 in $15ab^3c$

LINEAR EQUATION

1) Write each of the following statements as equation:-

a) 9 exceeds a number by 3.

b) A number x increased by 7 is 15.

c) 6 times a number is 5 more than the number.

d) A number divided by 8 gives 7.

2) Solve the following equations:-

a) $z - 3 = 2z - 5$ b) $3x + 5 = 13 - x$ c) $\frac{1}{2}x + 7 = 11$

d) $3x + 12 = 2(x + 8)$ e) $3(x + 3) - 2(x - 1) = 5(x - 5)$

f) $\frac{x}{8} - \frac{1}{2} = \frac{x}{6} - 2$

3) Solve and verify:-

a) $4x + 9 = 16$

b) $3(x + 2) - 2(x - 1) = 7$

c) $\frac{2x}{5} - \frac{x}{2} = \frac{5}{2}$

d) $3(x + 6) = 24 - x$

- 4) If 8 is subtracted from 3 times a number the result is 16. Find the number.
- 5) The sum of three consecutive natural numbers is 66. Find the numbers.
- 6) The sum of two consecutive odd numbers is 104. Find the numbers.
- 7) Mohan is thrice as old as his son. 5 years back Mohan was 5 times as old as his son. Find their present ages.
- 8) The length of a rectangular park is thrice its breadth. If the perimeter of the park is 228m, find its dimensions.
- 9) Find two numbers such that one of the numbers exceed the other by 9 and their sum is 81.
- 10) A bag contains 80 rupees in the form of 1 rupee and 50 paise coins. If the number of 1 rupee coins is twice the number of 50 paise coins, find the number of coins of each type.

PLAYING WITH NUMBERS

1) Fill up the blanks:-

- a) HCF of two consecutive numbers is _____.
- b) A factor of a number is an exact _____ of that number.
- c) LCM of 7 and 12 is _____.
- d) If two numbers are co-primes at least one of them must be prime _____ (True/False)
- e) The smallest composite number is _____.
- f) Product of two numbers = their HCF \times _____.
- g) A number having more than two factors is called a _____ number.
- h) The only even prime number is _____.
- i) The only prime triplet is _____.
- j) The smallest odd composite number is _____.

2) Using divisibility test, find whether the number

- a) 46523 is divisible by 6. b) 6021 is divisible by 7.
- c) 36792 is divisible by 9. d) 901352 is divisible by 11.

3) Write all the factors of 36 and 45.

4) Write the first three multiples of 15 and 24.

5) Prime factorize: a) 1260 b) 945 c) 20570 d) 1080

6) Find the HCF (by prime factorization method):-

a) 144, 180, 192 b) 144, 252, 630 c) 72, 108, 180 d) 1872, 1320

7) Find the HCF (by long division method):-

a) 136, 170, 255 b) 403, 434, 465 c) 527, 646, 74 d) 391, 425, 527

8) Find the LCM of:-

a) 112, 168, 266 b) 22, 54, 135, 198 c) 144, 180, 384 d) 48, 64, 72, 96, 108

9) a) The product of two numbers is 7125. If their HCF is 5, find their LCM.

b) The LCM of 248 and 868 is 1736. Find their HCF

10) In a school the durations of period in primary section is 40 minutes; in middle section is 60 minutes and in senior section its 1hr 20 minutes. If the first bell for each section rings at 7:00 a.m., when will the three bells again ring together?

11) Find the greatest number of five digits exactly divisible by 9, 12, 15, 18, 24.

12) Find the least number which when divided by 16, 36 and 40 leaves 5 as remainder in each case.

13) Find the greatest number which divides 285 and 1249 leaving remainders 9 and 7 respectively.

14) Three sticks of length 63cm, 70cm and 77cm are to be used to measure the length of a pole. What should be the minimum length of the pole so that each of the stick can be used to measure the exact length of the pole.

15) Express each of the following as the sum of two odd primes:-

i) 12

ii) 36