

NISCORT FATHER AGNEL SCHOOL, VAISHALI (2017-18)
SELF LEARNING WORKSHEET
CLASS-VI
CH-12 RATIO AND PROPORTION

1. Express each of the following ratios in simplest form:

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|-------------|------------------|
| (i) 22 : 66 | (v) 14 : 20 |
| (ii) 7 : 49 | (vi) 33 : 44 |
| (iii) 4 : 6 | (vii) 48 : 54 |
| (iv) 6 : 15 | (viii) 200 : 250 |

2. Convert each of the following ratios in same units and then express in its lowest term:

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|-----------------------------|-----------------------------|
| (i) 5 kg : 800 gm | (viii) 10 paise : 1 Rupee |
| (ii) 3 cm : 2 m | (ix) 75 cm : 3 m |
| (iii) 3 m : 90 cm | (x) 200 m : 5 km |
| (iv) 2 years : 9 months | (xi) 50 min : 1½ hour |
| (v) 1 hour : 45 minutes | (xii) 3 hours : 1 day |
| (vi) 4 minutes : 45 seconds | (xiii) 200 g : 1 kilogram |
| (vii) 40 kg : 1 quintal | (xiv) 6 month : 11313 years |

3.Reduce the following ratios to the lowest terms:

- (i) 1 hour 20 mins : 2 hours
(ii) 4 weeks : 49 days
(iii) 3 years 4 months : 5 years 5 months
(iv) 2 m 40 cm : 1 m 44 cm
(v) 5 kg 500 gm : 2 kg 750 gm

4.Fill in the blanks:

- | | |
|-------------------------|------------------------|
| (i) 27 : ____ = 9 : 19 | (iv) 6 : 4 = ____ : 16 |
| (ii) 14 : 16 = ____ : 8 | (v) 4 : 6 = 2 : ____ |
| (iii) ____ : 2 = 5 : 10 | (vi) 6 : 7 = ____ : 35 |

5. In a packet containing 80 watches, 15 watches were found to be defective. Find the ratio of defective to good watches.

6. A rectangular field is 100 m by 80 m. Find the ratio of:

(i) length to its breadth

(ii) breadth to its perimeter.

7. The monthly salary of a person is Rs.12,000 and his monthly expenditure is Rs.8,500. Find the ratio between his:

(i) salary and expenditure.

(ii) expenditure and savings.

(iii) savings and salary.

8. There are 28 boys and 36 girls in a party. Find the ratio of:

(i) boys to girls

(ii) boys to total number of children

(iii) girls to total number of children

9. Out of 1800 students in a school, 750 opted football, 800 opted cricket and remaining opted hockey. If a student can opt only one game, find the ratio of:

(i) the number of students opting football to the number of students opting cricket

(ii) the number of students opting football to the number of students opting hockey

(iii) the number of students opting cricket to the total number of students.

10. Divide 64 cm in the ratio 5 : 3.

11. The angles of a triangle are in the ratio 3 : 2 : 7. Find each angle.

12. Are 6, 2, 4 and 3 in proportion?

13. Are 2 : 3 and 4 : 6 equal?

14. Find the value of k, if 2, 3, k, 6 are in proportion.

15. In a proportion, the first, third and fourth terms are 3, 21, 35. Find the second term.

16. A recipe for samosas require 270g of flour for making 9 samosas. How much flour will be needed for making 4 samosas ?

17. A vehicle travels 108 km on 18 litres of petrol. How far would it travels on 32 litres?

18. If 17 bricks weighs 102 kg, what would 28 bricks weigh?

19. Cost of 4 dozens of bananas is Rs.60. How many bananas can be purchased for Rs. 12.50?

20. Seema can type 150 words in 3 minutes. Find out

(i) In how much time can she type 375 words?

(ii) How many words can she type in 9 minutes 30 seconds?

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SELF LEARNING WORKSHEET
CLASS-VI
CH-11 ALGEBRA

1. Write the following statements algebraically:

- (i) Sum of m and 7.
- (ii) The sum of k and 49 added to a .
- (iii) The sum of k and l added to 14.
- (iv) 19 added to the sum of w and z .
- (v) x increase by 24
- (vi) z increase by sum of a and b

2. Write each of the following algebraically using signs and symbols:

- (i) Sum of p and q
- (ii) w added to 110.
- (iii) The sum of m and 25 added to n .
- (iv) The sum of a and b added to c .
- (v) 10 increase by sum of m and n
- (vi) Increase v by 39.

3. Write each of the following statements using numbers, literals and symbols:

- (i) Subtract v from 650
- (ii) q less than a sum of p and 10
- (iii) 19 less than a sum of a and b
- (iv) Decrease the sum of m and n by x
- (v) Decrease the sum of k and 50 by w
- (vi) y is diminished by 150
- (i) w times m
- (ii) v times 59
- (iii) The product of p and 160.
- (iv) Multiply z and 9.
- (v) k times the sum of 89 and x .
- (vi) x times 10 added to 19 .

(vii) The product of u and v .

(viii) Multiply s and k .

(ix) The product of x and $5t$

(x) 12 times z is subtract from p

(xi) y times m is subtract from 35

(xii) Four times a number p subtracted from 70

4. Write each of the following algebraically using signs and symbols:

(i) Quotient of k by x is multiplied by z .

(ii) Quotient of m by n added to the product of m and n .

(iii) 50 taken away from the quotient of $2p$ by $3q$.

(iv) Product of 10 and x divided by the difference of u and 7.

(v) Quotient of d by t is added to r .

(vi) u taken away from the quotient of $5h$ by $8v$.

5. Express the share of each of the student algebraically if m mangoes were equally distributed among twenty five students.

6. The side of an equilateral triangle is shown by a . Express the perimeter of the equilateral triangle using a .

7. The base of an isosceles triangle is 5cm. Length of each of its equal sides is denoted by m . Express the perimeter of this triangle in terms of m .

8. The length of a postcard is 2 cm less than 3 times its breadth. What is the length, if the breadth is b cm.

9. A car travels at v km/hr. It is going from Phagwara to New Delhi. After the car has travelled for 6 hours, New Delhi is still 50 km away. What is the distance from Phagwara to New Delhi?

10. Let there be 'n' number of birds in the nest :

(i) What will be the number of birds left if 2 flew away?

(ii) What will be the number of birds in the nest after 3 more birds joined ?

11. Present age of Ganga Ram is x years.

(i) What was his age 10 years back?

(ii) What will be his age after 10 years from now?

(iii) Ganga Ram's mother is five times his age. What is the age of his mother?

(iv) Ganga Ram's grandmother age is seven less than the eight times the Ganga Ram's age. What is his grandmother's age?

12. The longest side of a scalene triangle is 3 times the shortest side whereas the third side is 2 metre more than the shortest side. Express the length of the longest side and the third side in terms of the shortest side.