Niscort FATHER AGNEL SCHOOL, VAISHALI
SELF-LEARNING WORKSHEET
CLASS VII
VISUALISING SOLID SHAPES

Q 1 What is a hexogonal prism?

Q 2 How many vertices are there in a pyramid with a square base?

Q 3 How many edges are there in a cuboid?

Q 4 How many edges are there in a triangular pyramid?

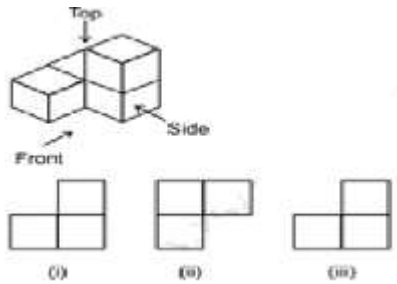
Q 5 How many vertices are there in a triangular pyramid?

Q 6 How many faces are there in a triangular prism?

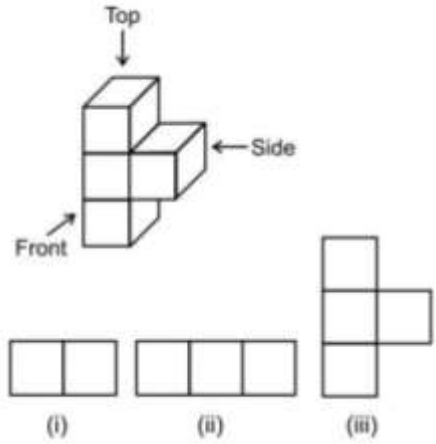
Q 7 What are the three views in a solid?

Q 8 What are regular polyhedrons?

Q 9 For the given solid, identify the top view, front view and side view.

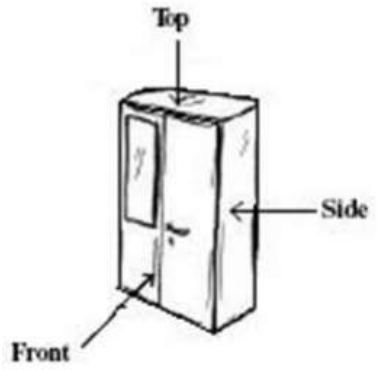


Q 10 Identify the top view, front view and side view for the given solid



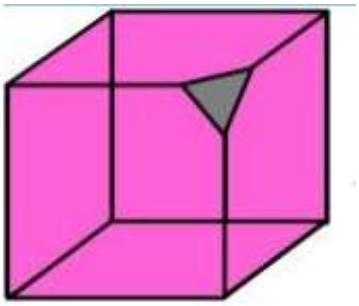
Q 11 Find the number of edges, vertices and faces in a cylinder.

Q 12 Draw the front, side and top view of an almirah.

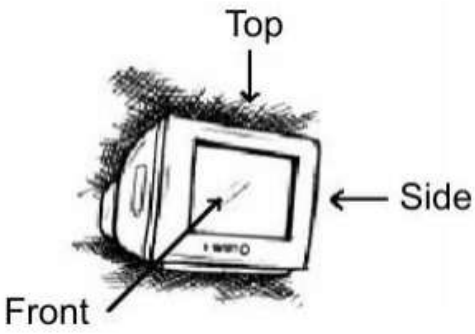


Q 13 Find the number of edges, vertices and faces in a rectangular pyramid.

Q 14 Find the number of edges, vertices and faces in a given solid.



Q 15 Draw the front, side and top view of a television.



Niscort FATHER AGNEL SCHOOL, VAISHALI
SELF-LEARNING WORKSHEET
CLASS VII
COMPARING QUANTITIES I
(RATIO AND PROPORTION)

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

(a) 5.6 m to 28 cm

(b) 6 hours to a day

(c) 20 litres to 0.75 litres

(d) 1728 : 2400

2. Simplify the following the ratios

a) 1/4 : 1/6 : 1/8
b) 3.6 : 4.5
c) $3\frac{2}{3} : 4\frac{1}{2}$
d) $3: 2.4 : 2\frac{1}{4}$

3. Comparing the following ratios

a) 5:7 and 4:3
b) 1/3 :1/4 and 1/5: ¼
c) $2\frac{1}{3} : 3\frac{1}{3}$ *and* $0.3 : 1$
d) $2\frac{3}{4} : 1\frac{2}{3}$ *and* $1.2 : 1.5$

4. In the ratio 3 : 5, the consequent is 15. Find the antecedent.

5. Divide 3000 among P, Q, R in the ratio 2 : 3 : 5

6. **Which of the following statements are true?**

(a) 25 : 35 = 45 : 55

(b) 105 : 30 = 49 : 14

(c) 45 : 48 = 60 : 64

(d) 2/3 : 7/9 = 3/4 : 5/6

(e) 4.2 : 12.6 = 1.5 : 4.5

(f) 12 : 18 = 28 : 12

7. **Determine if the following ratios form a proportion.**

(a) 25 cm : 1 m = □40 : □160

(b) 200 ml : 2.5 l = □4 : □50

(c) 32 m : 64 m = 7 seconds : 14 seconds

(d) 6.5 litres : 13 litres = 50 kg : 10 kg

8. **Find the value of x in each of the following.**

(a) 4, 5, x, 480

(b) 9, 21, 33, x

(c) x, 28, 20, 4

(d) 15, x, 27, 63

(e) x, 30, 60

(f) 6, x, 24

9. **Find the fourth proportional to**

(a) 5.6, 2.1, 1.6, x

(b) 3/4, 15/16, 2/4, x

(c) $5^{3}/_{5}$, $3^{1}/_{2}$, 2, x

(d) 8, 6, 4, x

10. **Find the third proportional to**

(a) 9, 6, x

(b) 0.2, 0.4, x

(c) 9/16, 3/5, x

(d) 6, 12, x

11. **Find the third proportional to**

(a) 9, 6, x

(b) 0.2, 0.4, x

(c) 9/16, 3/5, x

(d) 6, 12, x

12. A herd of 52 horses has 12 white and some black horses. What is the ratio of white to black horses?

13. A jar of pinto beans and black beans in a ratio of 1 : 1, and 300 of the beans are pinto beans. How many beans in total are there in the jar?
14. Jayden and Caden share a reward of □140 in a ratio of 2 : 5. What fraction of the total reward does Jayden get?
15. Gavin has nickels, dimes, and quarters in the ratio of 8 : 1 : 2. If 30 of Gavin's coins are quarters, how many nickels and dimes does Gavin have?
16. A truck is carrying pear juice, cherry juice, and apple juice bottles in a ratio of 3 : 1 : 3. If there are 16 cherry juice bottles, then how many juice bottles in total are there?
17. Two numbers are in the ratio 3 : 4. If the sum of numbers is 63, find the numbers.
18. A bag contains □510 in the form of 50 p, 25 p and 20 p coins in the ratio 2 : 3 : 4. Find the number of coins of each type.
19. If 2A = 3B = 4C, find A : B : C
20. The length of the ribbon was originally 30 cm. It was reduced in the ratio 5 : 3. What is its length now?
21. Mother divided the money among Ron, Sam and Maria in the ratio 2 : 3 : 5. If Maria got □150, find the total amount and the money received by Ron and Sam.

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COMPARING QUANTITIES II
(Percentage and Profit/Loss)

1. A total of 2500 mini-pizzas were brought to the school picnic. The children ate 2225 of the mini-pizzas. What was the percentage of mini-pizzas left?
2. Find the number whose:

   A) 30% is 6 B) 90% is 10.8 C) 25% is 2.75

   D) 13% is 0.78 E) 26% is 2.34 F) 76% is 10.64.

3. Paul got 56% in his Computer test. If the test was of 25 marks, then how many marks did he get?
4. An electrician bought an old TV for □1120 and spent □45 for fixing it. Finally, he sold it for □1234.90. Find the gain percentage.
5. If the price of cooking oil increases by 14%, by what percent should a family decrease its consumption of cooking oil, so that their expenditure on cooking oil remains same as earlier?

6. A shopkeeper mixes two variants of wheat in the ratio 2:3. The first variant costs □50 per kg, while the other costs 40 per kg. If the mixed wheat is sold at the price of 55 per kg then find the profit/loss incurred by shopkeeper.
7. In an exam of Mathematics and English, 28% and 21% students failed in Mathematics and English respectively. If 7% students failed both in Mathematics and English, find the percentage of students who passed in both the exams.
8. Richard's income is 40% less than Joseph's income, Paul's income is 30% less than Richard's income, and Michelle's income is 20% less than Richard's income. Joseph gave 30% of his income to Paul and 70% of his income to Michelle. What would be the fraction of Paul's new income and Michelle's new income?
9. Convert the following to decimal:

   A) 137.1% B) 39% C) 148.9% D) 96% E) 21.9% F) 110.3%

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CLASS VII
COMPARING QUANTITIES III
(SIMPLE INTEREST)

1. Find the simple interest and amount in each of the following:

(a) P = □1800 R = 5% T = 1 year

(b) P = □2600 R = 12% T = 3 years

(c) P = □3125 R = 15% T = 73 days

(d) P = □5660 R = 11% T = 9 months

(e) P = □180 R = 3% T = $1^1/_4$ year

2. Find the Principal when…..

(a) S.I. = □ 192 Rate = 6% per annum Time = 4 years

(b) S.I = □ 20 Rate = 2% per annum Time = 20 month

3. Find the Rate when…..

(a) Principal = □ 350 Time = $2^1/_2$ years S.I. = □ 140

(b) Principal = □ 9600 Time = 3 months S.I = □ 72

4. Find the Time when…..

(a) Principal = □ 500 Rate = 7.5% p.a S.I. = □ 150

(b) Principal = □ 700 Rate = 18% p.a. S.I. = □ 78

5. Find the simple Interest and Amount

(a) Principal = □ 640 Rate = $12^1/_2$ % Time = 6 months

(b) Principal = □ 10000 Rate = 18% Time = 7 years

6. What sum would yield an interest of □36 in 3 years at 3% p.a.?
7. At what rate per cent per annum will □250 amount to $330 in 4 years?
8. At what rate per cent per annum will □400 yield an interest of □78 in $1^1/_2$ years?
9. In what time will □400 amount to □512 if the simple interest is the calculated at 14% p.a.?
10. A sum amount to □2400 at 15% simple interest per annum after 4 years. Find the sum.
11. Ken borrowed □2000 from Sam at 8% per annum. After 6 year he cleared the amount by giving □2600 cash and a watch. Find the cost of the watch.
12. In how many years will □400 yield an interest of □112 at 14% simple interest?
13. In how many years will □12000 yield an interest of □13230 at 10% simple interest?
14. In how many years will □600 double itself at 10% simple interest?
15. At what rate of simple interest will □5000 amount to □6050 in 3 years, 4 months?
16. At what rate of simple interest will the sum of money double itself in 6 years?
17. Find the simple interest at the rate of 5% p.a. for 3 years on that principal which in 4 years, 8 months at the rate of 5% p.a. gives □1200 as simple interest.
18. At what rate per cent per annum will □4000 yield an interest of □410 in 2 years?
19. Simple interest on a certain sum is $^{16}/_{25}$ of the sum. Find the rate per cent and time if both are numerically equal. **[Hint: (T = R), P = x, S.I. = $^{16}/_{25}$ x]**
20. Simple interest on a sum of money at the end of 5 years is $^4/_5$ of the sum itself. Find the rate per cent p.a.