1. A works twice as fast as B. If both of them can together finish a piece of work in 12 days, then B alon can do it in (1 x 1 1= 11)

a)24days b)27days c)36days d)48days

1. The parallel sides of a trapezium are in the ratio 3:4 and the perpendicular distance between them is 12cm. If the area of the trapezium is 630$cm^{2}$, then its shorter of the parallel sides is

a)45cm b)42cm c)60cm d)36cm

1. How many cubes of 10cm edge can be put in a cubical box of 1m edge?

 a)10 b)100 c)1000 d)10000

1. If the capacity of a cylindrical tank is 1848$m^{2}$, and the diameter of the base is 14m, the depth of the tank is

a)8m b)12m c)16m d)18m

1. 8 cards are numbered as 1, 2, 3, 4, 5, 6, 7, 8 respectively. They are kept in a box and mixed thoroughly. One card is chosen at random. What is the probability of getting a number less than 4?

a)$\frac{1}{2}$ b)$ \frac{3}{4}$ c)$ \frac{3}{8}$ d)$ \frac{3}{8}$

1. ($\frac{7}{-26}$ + $\frac{16}{39}$ ) = ?

 a)$\frac{11}{78}$ b)$ \frac{-11}{ 78}$ c)$ \frac{11}{39}$ d)$ \frac{-11}{ 39}$

1. Additive inverse of $\frac{-5}{ 9}$

 a)$\frac{-9}{ 5}$ b)$ 0$ c)$ \frac{5}{9}$ d)$ \frac{9}{5}$

1. $(82)^{2}$ – $(18)^{2}$ = ?

a)8218 b)6418 c)6400 d)7204

1. (x + 5)(x – 3) = ?

a) $x^{2}$ + 5x - 15 b)$ x^{2}$ - 3x - 15 c)$ x^{2}$ + 2x + 15 d)$ x^{2}$ + 2x - 15

1. If 2x – 3 = x + 2, then x =?

 a)1 b)3 c)5 d)7

1. The volume of the cube is 343$cm^{2}$. Its total surface area is

a) 196$cm^{2}$ b) 49$cm^{2}$ c) 294$cm^{2}$ d) 147$cm^{2}$

1. Factorise:4$x^{2}$ – 9 (1 x 6 = 6)
2. Find the product (4x + 5y)(4x – 5y)
3. Represent on number line 5$\frac{5}{7}$
4. Three angles of the quadrilaterals are $54^{0}$ , $80^{0}$ and $116^{0}$. Find the measure of fourth angle.
5. Write down the number of faces of (a)squared pyramid (b)Tetrahedron
6. In a single throw of a coin, what is the probability of getting a tail?
7. A, B and C can do a piece of work in 10days, 12days and 15days respectively. How long will they take to finish it if they work together? (2 x 12 = 24)
8. Two angles of the quadrilaterals are $85^{0}$ , $75^{0}$ respectively. Other two angles are equal. Find the measure of each of the equal angle.
9. Construct a quadrilateral PQRS in which PQ = 6cm, QR = 5.6cm, RS = 2.7cm, ∟Q = $45^{0}$ and , ∟R = $90^{0}$
10. Find the area of a trapezium whose parallel sides are 24cm and 20cm and the distance between them is 15cm.
11. Verify the Euler’s relation for (a) A tetrahedron.
12. A milk tank is in the form of a cylinder whose radius is 1.5m and height is 10.5m. Find the quantity of milk in litre that can be stored in the tank.
13. The followings data gives the number of children in 40 families:

1, 2, 6, 5, 1, 5, 1, 3, 2, 6, 2, 3, 4, 2, 0, 4, 4, 3, 2, 2, 0, 0, 1, 2, 2, 4, 3, 2, 1, 0, 5, 1, 2, 4, 3, 4, 1, 6, 2, 2

1. A bag contains 4 white and 5 blue balls. They are mixed thoroughly and one ball is drawn at random. What is the probability of getting (i)a white ball (ii) a blue ball?
2. Find two rational numbers between 4 and 5.
3. Find the product (5x + 7)(3x + 4)
4. Factorise: 4$y^{2}$ + 20y + 25
5. Solve: 5x + 7 = 2x – 8
6. A and B can finish a piece of work in 16 days and 12 days respectively. A started the work and worked at it for 2 days. He was then joined by B. Find total time taken to finish the work.

 (3 x 12 = 36)

1. Prove that the sum of the angles of a quadrilateral is $360^{0}$
2. Construct a parallelogram ABCD in which AB = 5.2cm, BC = 4.7cm and AC = 7.8cm.
3. The area of a trapezium is 1080 $cm^{2}$. If the length of its parallel sides be 55cm and 35cm, find the distance between them.
4. Write down the number of vertices of each of the following figures:

(i)Triangular prism (ii)Squared pyramid (iii) Tetrahedron

1. A solid rectangular piece of iron measures 1.05m x 70cm x 1.5cm. Find the weight of the piece in kilogram if 1$cm^{3}$ of iron weighs 8gm.
2. The top speeds of 30 different land animals have been organized into a frequency table given below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Maximum Speed(in Km/hr) | 10 - 20 | 20 - 30 | 30 - 40 | 40 - 50 | 50 - 60 | 60 - 70 |
| Number of animal | 3 | 5 | 10 | 8 | 0 | 2 |

1. A bag contain 5 white, 6 red and 4 green balls. One ball is drawn random. What is the probability that the ball drawn is (i) green? (ii) white? (iii)