

**Dr. M.K.K. ARYA MODEL SCHOOL, PANIPAT**

**MATHS ASSIGNMENT**

**CLASS – VIII**

**CH – 14(Factorization)**

1. Factorize:  $12a^3 - 15a^2 - 7a$
2. Factorize:  $(x + 2)^2 + 5(x + 2)$
3. Find the factors of  $3a^2 - 108b^2$ .
4. Factorize:  $7ab + 9cd + 7ad + 9bc$
5. Factorize:  $x^2 - y^2 + 2x + 1$
6. Factorize:  $16a^2 - 40ab + 25b^2$
7. Factorize:  $\frac{16}{81}m^2 - 121$
8. Factorize:  $2x^4 - 32$
9. Factorize:  $12x^2 - x - 1$
10. Factorize:  $3x^3y - 243xy^3$
11. Area of a square is  $4x^2 + 20x + 25$ . Find the side of a square.
12. Find the square root of  $49y^2 - 56y + 16$
13. Factorize  $x^3 - x$
14. Factorize:  $a^2 + 25a - 54$
15. Factorize:  $\frac{a^2}{b^2} + 2 + \frac{b^2}{a^2}$

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**CHAPTER – 11(MENSURATION)**

1. Find the area of the thin sheeting required for making an open cistern, 5m long, 3m wide, 4m deep.
2. Two cubes, each of side 15 cm are joined end to end. Find the surface area of the resulting cuboid.
3. The perimeter of one face of a cube is 20 cm. Find its total surface area.
4. Find the volume of wood required for making a closed box with external measurements 14 cm by 9.5 cm by 6 cm, and wood is 7.5 mm thick.
5. The bottom of a tank measures 25m × 20m. Find its depth if it contains 2000 m<sup>3</sup> water.
6. A solid cylinder has total surface area of 462 sq cm. Its curved area is one third of its total surface area. Find the volume of the cylinder. (Take  $\pi = \frac{22}{7}$ )
7. Find the height of the solid circular cylinder of total surface area 660 cm<sup>2</sup> and radius 5 cm.
8. How many bricks, each 25 cm by 15 cm by 8 cm, are required for a wall 32 m long, 3 m high, 40 cm thick?
9. Express 7.8 litres in cm<sup>3</sup>.
10. A river 2 m deep and 45 m wide is flowing at the rate of 3 km per hour. Find the amount of water that runs into the sea per minute.
11. The total surface area of a cube is 54cm<sup>2</sup>. What is the length of its sides.
12. A solid cube of edge 10cm is melted and cast into a cuboid whose base measures 20cm by 10cm. find the height of the cuboid.
13. If the volume a cube is 729cm<sup>3</sup>, then find its surface area.
14. A carpenter makes a letter- box which has a volume of 13400cm<sup>3</sup>. The base has an area of 670cm<sup>2</sup>, what is the height of the letter-box?

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**CH- 13 (Direct and Inverse Proportion)**

1. A fish with a mass of 3 kg causes a fishing pole to bend 9 cm. if the amount of bending varies directly as the mass, how much will the pole bend for a 2 kg fish?
2. If 1800 persons can finish the construction of a building in 40 days, how many persons are needed to complete the construction of the building in 24 days?
3. A fort had provisions for 150 men for 45 days. After 10 days 25 men left the fort. How long will the food last at the same rate?
4. 18 men can do a piece of work in 10 days. How many less men are required if the work is to be completed in 15 days?
5. A hostel had ration for 60 days for 500 students. After 12 days, 300 more students join the hostel. How long will the remaining ration last?
6. 25 horses eat 5 bags of corn in 12 days, how much will 10 horses eat in 18 days?
7. In how many days working 8 hours each day, can 12 men do the same work as 10 men working 9 hours a day do in 16 days?
8. A besieged town has provisions to last for 3 weeks. Its population is 22400. How many people must be sent away in order that the provisions may last for 7 weeks?
9. Harsh takes 150 steps in walking a distance of 125 metres. What distance would he cover in 360 steps?
10. A group of 210 men had provisions for 60 days. After 10 days, 60 men left. How long will the remaining food last?

**CH- 16 (Playing with numbers)**

1. Replace each letter with the correct numeral:-

$$\begin{array}{r} (i) \quad 4 \quad A \quad 7 \quad 2 \\ \quad \quad B \quad 8 \quad 5 \quad C \\ \hline \quad \quad 9 \quad 2 \quad D \quad 6 \\ \hline E \quad 7 \quad 7 \quad 7 \quad 5 \end{array}$$

$$\begin{array}{r} (ii) \quad A \quad 2 \quad 4 \quad 6 \\ \quad \quad - \quad 5 \quad 2 \quad B \quad 7 \\ \hline \quad \quad \quad 1 \quad C \quad D \quad E \end{array}$$

$$\begin{array}{r} (iii) \quad 1 \quad 2 \quad A \\ \quad \quad X \quad B \quad 1 \quad 5 \\ \quad \quad \quad C \quad 2 \quad 5 \\ \quad \quad \quad D \quad E \quad F \quad 0 \\ \hline \quad \quad 2 \quad G \quad 0 \quad 0 \quad 0 \\ \hline H \quad 6 \quad 8 \quad K \quad J \end{array}$$

B 3

(iv)  $37 \ ) \ A \ 5 \ 1 \ ($

$$\begin{array}{r} \quad \quad 7 \quad 4 \quad 0 \\ \hline \quad \quad 1 \quad C \quad D \\ \hline \quad \quad \quad E \quad F \quad G \\ \hline \quad \quad \quad \quad 0 \end{array}$$

(v)  $A \ 6 \ B \ 4 \ C$

$$\begin{array}{r} \quad \quad + \quad 1 \quad 7 \quad 2 \quad 5 \quad 5 \\ \hline \quad \quad \quad 9 \quad D \quad 0 \quad E \quad 8 \end{array}$$

(vi)  $1 \ A \ 3 \ B \ 5$

$$\begin{array}{r} \quad \quad - \quad 5 \quad C \quad 7 \quad D \\ \hline \quad \quad \quad 6 \quad 6 \quad 6 \quad 6 \end{array}$$