

17/11/21

Maths abhyas

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Maths direct and Inverse Variation

1) Let Slices of pizza be x

If Children will increase then Slices will decrease. So, it is case of inverse variation.

$$2 \times 3 = 3 \times x$$

$$6 = 3x$$

$$x = \frac{6}{3} = 2$$

Each Child will get Slices of pizza

No, it is not better to eat Junk food it can harm our health.

2) As Shadow is directly proportional to height we can say that.

So, in case of electric pole

$$\frac{14}{10} = k \rightarrow (1)$$

In Case of tree

$H_1 = k - (2)$, where H_1 is height
15 of tree

So from (1) and (2)

$$\frac{14}{10} = \frac{H_1}{15}$$

$$H_1 = 14 \times \frac{15}{10} = 21 \text{ m}$$

So height of tree is 21 m.

3- If 36 men can finish a piece of work in 25 days how many day will 15 men take to do it.

= 60 days, we have to use inverse variation.

$$(36 \times 25) \div 15$$

$$= 12 \times 5$$

$$= 60 =$$

4) Labourers \uparrow days \downarrow
 10 15
 25 4

$$= \frac{10}{25} = \frac{x}{15}$$

$$= 15 \times 10 = 25 \times x$$

$$= x = \frac{25 \times 15 \times 10}{25}$$

$x = 6 \text{ days}$

In 6 days

5) 2 apples Cost = 30

1 apple Cost = 15 ₹

= 15 ₹ \times 28 apples -

= 420 ₹ Cost of 28 apples.

6) Let the worker be x

$$360 \times 60 = 45 \times x$$

$$(360 \times 60) \div 45 = x$$

$$360 \div 45 = 8$$

$$8 \times 60 = x$$

$$480 = x$$

480 workers

7) Let work to be done x

Time taken by 420 persons to Complete the work $x = 9$ months

$$x = 420 \times 9 = 3780$$

People required to Complete the work in 9 months $= x \div 7 = 3780 \div 7$

$$3780 \div 7 = 540$$

\therefore , The Contractor had to employ 540 people more to Complete the job.

8) Given that fort had provision of food for 1200 men for 28 days

Therefore, after 4 days, the remaining food is sufficient for 1200 men for 24 days

Remaining men after 4 days = $1200 - 300 = 900$

$$\frac{1200}{900} = \frac{x}{24}$$

$$\Rightarrow x = \frac{1200 \times 24}{900}$$

$$x = \frac{4}{3} \times 24$$

$$x = 4 \times 8$$

$$x = 32$$

$$4) x = 25$$

So train will cover a distance of 25 km
in 20 min:

$$y = 250 \times 60 \div 75 = 200 \text{ min}$$

It covers 20 minutes in 250 km/m