



Solutions

1 Method :

We rearrange the expression to $\frac{1}{4} - \frac{0.1}{4} + \frac{1}{0.4} - \frac{0.1}{0.4}$. Since $\frac{1}{4} = \frac{0.1}{0.4}$,

the first two terms of the expression cancel out, $\frac{1}{4} - \frac{0.1}{0.4} + \frac{1}{0.4} - \frac{0.1}{4} =$

$$\frac{1}{0.4} - \frac{0.1}{4}.$$

Since $\frac{1}{0.4} = \frac{10}{4}$, we will have $\frac{1}{0.4} - \frac{0.1}{4} = \frac{10}{4} - \frac{0.1}{4} = \frac{9.9}{4} = 2.475$.

$$\frac{1}{4} - \frac{0.1}{4} + \frac{1}{0.4} - \frac{0.1}{0.4} = 2.475$$



Solutions

2 Method 1 : Find the unit price of each bookstore.

In Bookstore A, a book sell $RM\ 5 \div 3 = RM\ 1\frac{2}{3}$.

In Bookstore B, a book sell $RM\ 7 \times 80\% \div 4 = RM\ 1.40$.

Hence, Bookstore B sells cheaper books.

Method 2 :

Suppose you buy 12 books from Bookstore A and Bookstore B.

In Bookstore A, you need to pay $4 \times 5 = RM\ 20$.

In Bookstore B, you need to pay $3 \times 7 \times (1 - 0.2) = 21 \times 0.8 = RM\ 16.80$.

Hence, Bookstore B sells cheaper books.



Solutions

3 **Method 1** : Make a list of 252's factors and their quotient.

252's factors	252	126	84	63	42
	1	2	3	4	6
quotient	252	63	28	15.75	7

42 and 6.

Method 2 :

One of the numbers is 7 times of the other. We let N be one of the numbers that we are seeking. Then the other one will be $7N$. We know that $7N \times N = 252$.

$$\text{Hence, } N \times N = \frac{252}{7} = 36 \rightarrow N = 6.$$

So one of the numbers is 6, the other will be $7 \times 6 = 42$.



Solutions

4 Method 1 :

4 students can complete half of the job in 100 minutes, which means 1 student can complete half of the job in 400 minutes.

Then 6 students can complete half of the job in $\frac{400}{6}$ minutes.

Method 2 : Use algebra.

Let M be the time needed to complete half of the job. M relates inversely with the man power. The more man power, the less time needed to complete the job.

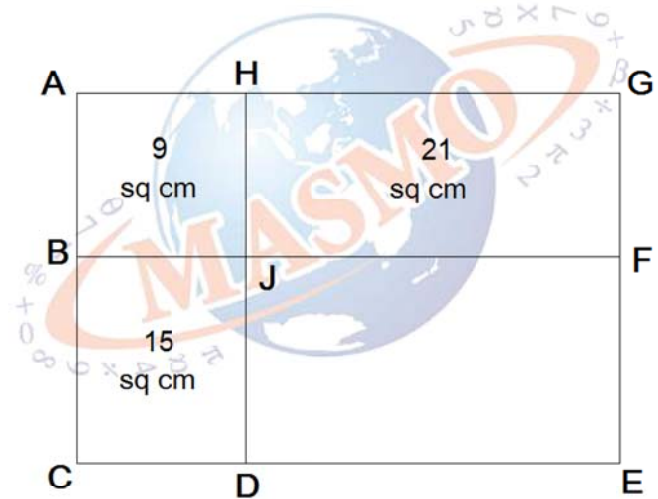
We have, $\frac{M}{100} = \frac{4}{6} \rightarrow M = \frac{400}{6}$.

The answer is $\frac{400}{6}$ minutes.



Solutions

5



Remember that length of each segment is a whole number. We determine the length of each small rectangle.

The area of rectangle can be obtained using:
Area = Length \times Wide

The area of ABHJ is 1×9 or 3×3 . 9 is neither a factor of 21 nor 15. So length BJ is 3 and length HJ is 3. Then JD will be 5 and JF will be 7. So the area of DEFJ is $7 \times 5 = 35$.

Then the area of ACEG, the large rectangle, is $9 + 15 + 21 + 35 = 80$.