4.3 PROPORTIONS

Choose a correct answer for the proportion for each of the following situations. TP2

10kg	5kg	30 minutes	15 laps	RM12	10 laps	45 minutes	RM24

Example:
If 3 pens cost RM18, then 5 pens cost RM30.

$$\frac{\text{RM18}}{\text{3 pens}} = \frac{\text{RM30}}{\text{5 pens}}$$

Tony swims 10 laps in 30 minutes. If he swims 15 laps, he will take 45 minutes.

_____ = _____

5 kg of rice is sold at RM12 and 10 kg of rice is sold at RM24.

_____ = _____

*Solve each of the following using the **proportion method**. TP3*
Choose your answer from the given options below:

number of players in 3 teams.	*petrol consumption for 190 km.*	*Number of lime trees planted in an area of 75m²*

Example:
The price of 2 kg of tea is RM18. What is the price of 10 kg of tea?

Let x be the price of 10kg of tea.

$$\frac{2kg}{RM18} = \frac{10kg}{x}$$

(×5 over the numerators)

$x = 5 \times RM18$
$= RM90$
Thus, the price for 10kg of tea is RM90.

1. *A car travels 570 km with a consumption of 60 litres of petrol. If the car travels 190 km, how much will be the petrol consumption?*

Let x be the _____

_____ = _____ / x

$x =$ ÷

=

Thus, the petrol consumption for 190km is litres.

2. *A farmer planted three lime trees per 1.5 m². How many lime trees can be planted by the farmer in an area of 75 m²?*

Let x be the _____

_____ / m^2 = x / m^2

$x =$ ×

=

Thus, the number of lime trees planted in an area of 75 m² is .

3. *There were 90 players in 15 volleyball teams who took part in a sports carnival. Find the number of players in 3 teams if each team had the same number of players.*

Let x be the _____

_____ = x / _____

$x =$ ÷

=

Thus, the number of players in 3 teams is

*Solve each of the following using the **unitary method**. TP3*

Joe works for 5 hours and is paid RM37.50. How much is his wage if he works for 8 hours? *Payment for 1 hour =* $\frac{\textbf{RM}}{\qquad}$ *=RM* *Payment for 8 hours = RM* $\times 8$ *= RM*	*There are 200 chairs in 8 rows. Find the total number of chairs in 25 rows.* *Number of chairs in 1 row =* $\frac{\qquad}{\qquad}$ *=* *chairs* *Number of chairs in 25 rows =* $\times$ *=* *chairs*

*Solve each of the following using the **cross multiplication method**.*

The mass of 60 identical books is 15 kg. Find the mass of 100 identical books. *Let x be* $\frac{\qquad}{\qquad} = \frac{\qquad}{x}$ $\times x =$ $\times$ $= \frac{\times}{\qquad}$ $=$ *kg*	*Mary uses 75 g of butter and 100 g of flour to make a dough. What is the mass of butter needed if she uses 240 g of flour to make the dough?* *Let x* $\frac{\qquad}{\qquad} = \frac{x}{\qquad}$ $\times x =$ $\times$ $= \frac{\times}{\qquad}$ $=$ *g*