

Name : _____

Metric units: S3

Rearranging Formulae

- 1) The volume V of a rectangular prism is calculated using the formula $V = lwh$, where l is the length, w is the width and h is the height of the prism. Rearrange the formula to make length(l) the subject.

$$l = \underline{\hspace{5cm}}$$

Find the length of a rectangular prism, if the width is 2.2 cm, height is 15 cm and volume is 594 cm^3 .

$$l = \underline{\hspace{5cm}}$$

- 2) The formula to find force (F) is $F = ma$, where m is the mass and a is the acceleration. Rearrange the formula to F , by rearranging the formula to make F the subject of the formula.

$$F = \underline{\hspace{5cm}}$$

Determine the temperature (T) in $^{\circ}\text{C}$.

$$F = \underline{\hspace{5cm}}$$

- 3) The simple interest (I) is calculated using the formula $I = prt$, where p is the principal, r is the interest rate and t is the time in years. Make r the subject of the formula.

$$r = \underline{\hspace{5cm}}$$

Serena took out a loan of $\text{£}10,000$ and paid an interest of $\text{£}2,310$ over 3 years. Calculate the interest rate (r).

$$r = \underline{\hspace{5cm}}$$

- 4) Power P is expressed in the equation $P = \frac{W}{t}$, where W is the work done and t is the time taken to complete the work. Rearrange the formula to make work(W) the subject.

$$W = \underline{\hspace{5cm}}$$

A machine requires 25 Joule/second of power to complete the work in 18 seconds. How much work can be done?

$$W = \underline{\hspace{5cm}}$$

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Name : _____

Answer key

Rearranging Formulae

Metric units: S3

- 1) The volume V of a rectangular prism is calculated using the formula $V = lwh$, where l is the length, w is the width and h is the height of the prism. Rearrange the formula to make length(l) the subject.

$$l = \frac{V}{wh}$$

Find the length of a rectangular prism, if the width is 2.2 cm, height is 15 cm and volume is 594 cm^3 .

$$l = 18 \text{ cm}$$

- 2) The formula to find force (F) is $F = ma$, where m is the mass and a is the acceleration. Rearrange the formula to make force (F) the subject of the formula.

$$F = ma$$

Determine the temperature (T) in degrees Celsius.

$$F = ma$$

- 3) The simple interest (I) is calculated using the formula $I = Prt$, where P is the principal amount, r is the interest rate and t is the time in years. Make r the subject of the formula.

$$r = \frac{I}{Pt}$$

Serena took out a loan of £2,310 towards her loan, and she paid an interest of £2,310.

$$r = \frac{I}{Pt}$$

- 4) Power P is expressed in the equation $P = \frac{W}{t}$, where W is the work done and t is the time taken to complete the work. Rearrange the formula to make work(W) the subject.

$$W = Pt$$

A machine requires 25 Joule/second of power to complete the work in 18 seconds. How much work can be done?

$$W = 450 \text{ J}$$

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