

Name : _____

Metric units: S1

Rearranging Formulae

- 1) The volume V of a cone is calculated using the formula $V = \frac{1}{3} \pi r^2 h$, where r is the radius and h is the height of the cone. Rearrange the formula, to make radius(r) the subject.

$$r = \underline{\hspace{2cm}}$$

The volume and height of a cone are $84\pi \text{ mm}^3$ and 7 mm respectively. Find the radius of the cone.

$$r = \underline{\hspace{2cm}}$$

- 2) The formula to find distance d is $d = vt$, where v is the velocity and t is the time taken to cover the distance.

$$d = \underline{\hspace{2cm}}$$

Frank drove his car for 2 hours at a velocity of 60 km/h. Find the distance covered by Frank.

$$d = \underline{\hspace{2cm}}$$

- 3) The perimeter P of a rectangle is given by $P = 2(l + w)$, where l and w are the length and width of the rectangle.

$$l = \underline{\hspace{2cm}}$$

Find the length of a rectangle with a perimeter of 30 cm and a width of 8 cm.

$$l = \underline{\hspace{2cm}}$$

- 4) The force F of an object is calculated by multiplying its mass ' m ' with acceleration ' a '. Rearrange the formula $F = ma$ to make mass(m) the subject.

$$m = \underline{\hspace{2cm}}$$

Determine the mass of an object, if it requires a force of $6,000 \text{ kg}\cdot\text{m/s}^2$ to accelerate at the rate of 2 m/s^2 .

$$m = \underline{\hspace{2cm}}$$

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total distance and t is the time taken. Rearrange the formula.

Find the distance covered by Frank.

Find the length (l) of the rectangle.

3 cm.

Name : _____

Answer key

Metric units: S1

Rearranging Formulae

- 1) The volume V of a cone is calculated using the formula $V = \frac{1}{3} \pi r^2 h$, where r is the radius and h is the height of the cone. Rearrange the formula, to make radius(r) the subject.

$$r = \frac{\sqrt{\frac{3V}{\pi h}}}{1}$$

The volume and height of a cone are $84\pi \text{ mm}^3$ and 7 mm respectively. Find the radius of the cone.

$$r = \underline{\quad 6 \text{ mm} \quad}$$

- 2) The formula to find distance d is $d = vt$, where v is the velocity and t is the time taken to cover the distance. Rearrange the formula, to make distance (d) the subject.

$$d = \underline{\quad vt \quad}$$

Frank drove his car for 2 hours at a velocity of 30 km/h. Find the distance covered by Frank.

$$d = \underline{\quad 60 \text{ km} \quad}$$

- 3) The perimeter P of a rectangle is calculated using the formula $P = 2(l + w)$, where l and w are the length and width of the rectangle. Rearrange the formula, to make length (l) the subject.

$$l = \frac{P}{2} - w$$

Find the length of a rectangle with a perimeter of 30 cm and a width of 5 cm.

$$l = \underline{\quad 10 \text{ cm} \quad}$$

- 4) The force F of an object is calculated by multiplying its mass ' m ' with acceleration ' a '. Rearrange the formula $F = ma$ to make mass(m) the subject.

$$m = \frac{F}{a}$$

Determine the mass of an object, if it requires a force of $6,000 \text{ kg}\cdot\text{m/s}^2$ to accelerate at the rate of 2 m/s^2 .

$$m = \underline{\quad 3,000 \text{ kg} \quad}$$

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