

# Substituting into Physics Formulae (Minimally Different)

Substitute the values given into the formulae.

1.  $F = ma$  ( $a = 5, m = 3$ ) find  $F$
2.  $F = ma$  ( $a = 1.2, m = 4$ ) find  $F$
3.  $F = ma$  ( $F = 10, m = 4$ ) find  $a$
4.  $W = mg$  ( $W = 20, g = 10$ ) find  $m$
5.  $V = f\lambda$  ( $\lambda = 1.5, f = 2.5$ ) find  $V$
6.  $f\lambda = V$  ( $\lambda = 4, f = 4.5$ ) find  $V$
7.  $f\lambda = V$  ( $\lambda = 7, V = 35$ ) find  $f$
8.  $\Delta GPE = mg\Delta h$  ( $g = 10, m = 8, \Delta h = 2$ ) find  $\Delta GPE$
9.  $\Delta GPE = mg\Delta h$  ( $\Delta h = 5.2, g = 10, m = 4$ ) find  $\Delta GPE$
10.  $mg\Delta h = \Delta GPE$  ( $\Delta h = 6, g = 10, \Delta GPE = 120$ ) find  $m$
11.  $P = I^2 R$  ( $R = 2, I = 3$ ) find  $P$
12.  $P = I^2 R$  ( $I = 2, P = 20$ ) find  $R$
13.  $I^2 R = P$  ( $P = 100, R = 4$ ) find  $I$
14.  $KE = \frac{1}{2}mv^2$  ( $m = 3, v = 2$ ) find  $KE$
15.  $\frac{1}{2}mv^2 = KE$  ( $m = 1.5, v = 3$ ) find  $KE$
16.  $\frac{1}{2}mv^2 = KE$  ( $v = 4, KE = 10$ ) find  $v$
17.  $\rho = \frac{m}{V}$  ( $m = 10, V = 4$ ) find  $\rho$
18.  $P = \frac{E}{t}$  ( $E = 10, t = 1$ ) find  $P$
19.  $\frac{E}{t} = P$  ( $E = 1.2, t = 0.2$ ) find  $P$

$$20. \frac{E}{t} = P \quad (P = 3, t = 4) \text{ find } E$$

$$21. P = \frac{E}{t} \quad (P = 5, E = 4) \text{ find } t$$

$$22. \rho = \frac{m}{V} \quad (\rho = 4, m = 2) \text{ find } V$$

$$23. a = \frac{(v-u)}{t} \quad (v = 8, u = 4, t = 2) \text{ find } a$$

$$24. a = \frac{v-u}{t} \quad (v = 4, u = 2, a = 10) \text{ find } t$$

$$25. a = \frac{v-u}{t} \quad (v = 2.3, u = 1.1, a = 5.5) \text{ find } t$$

$$26. a = \frac{v-u}{t} \quad (a = 2, t = 4, u = 1) \text{ find } v$$