

Master Maths 7 Worksheet 30

Writing Equations and Substitution

30

Name: _____

1. Write the following relationships as equations.

(a) m is equal to 7 added to p .

(b) P is equal to the sum of Q and R .

(c) Y is equal to X divided by 9.

(d) b is equal to the product of c and d .

(e) m is equal to 5 less than n .

2. Write the following relationships as equations.

(a) Power, P , of an electric motor is equal to the product of voltage, V , and current, I .

(b) Acceleration, a , is equal to velocity, v , divided by time, t .

(c) Magnetic force, F , on a wire is equal to the product of the magnetic field strength, B , length of the wire, L , and the current in the wire, I .

2. Find the value of y in the following equations if $x = 3$.

(a) $y = x + 5$

(b) $y = 4x$

(c) $y = 17 - x$

(d) $y = 2x + 4$

(e) $y = 5x - 6$

(f) $y = 4(x + 2)$

3. Find the value of P in the following equations for the values given.

(a) $P = 3Q + 7$ ($Q = 4$)

(b) $P = 2m + 3n$ ($m = 5, n = 1$)

(c) $P = 6(2a + 5)$ ($a = 3$)

(d) $P = 4(3x - 2y)$ ($x = 4, y = 2$)

4. Solve the following equations given that:

$$a = 2, b = 5 \text{ and } c = 8$$

(a) $y = 2a + 5b$

(b) $m = ab - c$

(c) $d = a(2b - c)$

(d) $R = a^2 + 5b - ac$