A GOOD SUBSTITUTE

SOLUTIONS

1 $x - 8$

INPUT	OUTPUT
$x = 10$	$10 - 8 = 2$
$x = 0$	$0 - 8 = -8$

2 $16 - 3y$

INPUT	OUTPUT
$y = 5$	$16 - 3 \times 5 = 1$
$y = -2$	$16 - 3 \times -2 = 16 + 6$ $= 22$

3 $\frac{n-6}{3}$

$n = -12$	$\frac{-12-6}{3} = \frac{-18}{3}$ $= -6$
$n = 0$	$\frac{0-6}{3} = \frac{-6}{3}$ $= -2$

4 $\frac{n}{3} - 6$

$n = -12$	$\frac{-12}{3} - 6 = -4 - 6$ $= -10$
$n = 0$	$\frac{0}{3} - 6 = 0 - 6$ $= -6$

5 $2(h + 3)$

$h = -5$	$2(-5 + 3) = 2 \times -2$ $= -4$
$h = -0.5$	$2(-0.5 + 3) = 2 \times 2.5$ $= 5$

6 $9 - h^2$

$h = 3$	$9 - 3^2 = 9 - 9 = 0$
$h = \frac{1}{3}$	$9 - \left(\frac{1}{3}\right)^2 = 9 - \frac{1}{9}$ $= 8\frac{8}{9}$

7 $y(4 - y)$

$y = 5$	$5(4 - 5) = 5 \times -1$ $= -5$
$y = 0$	$0(4 - 0) = 0$

8 $\sqrt{k+10}$

$k = 6$	$\sqrt{6+10} = \sqrt{16}$ $= 4$
$k = -6$	$\sqrt{-6+10} = \sqrt{4}$ $= 2$

9 $\frac{5(F-32)}{9}$

$F = 98.6$	$\frac{5(98.6-32)}{9} = 37$
$F = -40$	$\frac{5(-40-32)}{9} = \frac{5 \times -72}{9}$ $= -40$

10 $\frac{9C}{5} + 32$

$C = 100$	$\frac{9 \times 100}{5} + 32 = 180 + 32$ $= 212$
$C = -10$	$\frac{9 \times -10}{5} + 32 = -18 + 32$ $= 14$

11 $mn - n$

$m = -2$ $n = 7$	$-2 \times 7 - 7 = -14 - 7$ $= -21$
$m = 8.4$ $n = -10$	$8.4 \times (-10) - (-10)$ $= -84 + 10$ $= -74$

12 a^2b

$a = -5$ $b = -3$	$(-5)^2 \times -3 = 25 \times -3$ $= -75$
$a = -\frac{1}{2}$ $b = 40$	$(-\frac{1}{2})^2 \times 40 = \frac{1}{4} \times 40$ $= 10$