2.5 Rearranging Formulas

PRACTICE

Directions: Pick the best solution that solves each equation for the indicated variable.

1) $\frac{c}{a} = rd$, *for* a

$c\left(\frac{c}{a}\right) = rd(a)$

$\frac{c}{rd} = \frac{rda}{rd}$

a) $a = \frac{c}{rd}$
b) $a = -crd$
c) $a = c + rd$
d) $a = c - rd$

2) $g = xc - y$, *for* x.

$g = xc - y$

$+y \quad +y$

$g + y = xc$

$\frac{g+y}{c} = \frac{xc}{c}$

$\frac{g+y}{c} = x$

a) $x = -cg + cy$
b) $x = \frac{g-y}{c}$
c) $x = -g - y - c$
d) $x = \frac{g+y}{c}$

GEMPAS ✓

Directions: Solve each equation for the indicated variable.

3) $2x - y = 7$, *for* y

$-2x \quad -2x$

$\frac{-y}{-1} = \frac{7 - 2x}{-1}$

$y = -7 + 2x$

4) $12x + 4y = 16$, *for* y

$-12x \quad -12x$

$\frac{4y}{4} = \frac{16 - 12x}{4}$

$y = 4 - 3x$

5) $2x - 3y = 9$, *for* y

$-2x \quad -2x$

$\frac{-3y}{-3} = \frac{9 - 2x}{-3}$

$y = -3 + \frac{2}{3}x$

6) $2x - y = 10$ *for* x

$+y \quad +y$

$\frac{2x}{2} = \frac{10 + y}{2}$

$x = 5 + \frac{1}{2}y$

7) $A = \frac{1}{2}h(x+y)$, for x.

GEMDAS

$\frac{2A}{h} = \frac{h(x+y)}{h}$

$\frac{2A}{h} - y = x$

$\frac{2A}{h} = x + y$

$-y \quad -y$

8) $y - a = m(x - b)$, for x

GEMDAS

$\frac{y-a}{m} = \frac{m(x-b)}{m}$

$\frac{y-a}{m} = x - b$

$+b \quad +b$

$\frac{y-a}{m} + b = x$

Directions: Simplify each expression.

9) $(2x+6) + (6x^2 + 4x + 8)$

$-6x^2 - 2x + 14$

10) $(2y-5)(2y+5)$

$4y^2 + 10y - 10y - 25$

$4y^2 - 25$

11) $(2x+6)(6x^2+4x-8)$

$12x^3 + 8x^2 - 16x + 36x^2 + 24x - 48$

$12x^3 + 44x^2 + 8x - 48$

12) $(2y-5) + (2y+5)$

$4y - 0$

$4y$