Distributive Property

$3(x+2)$

$3x+6$

$6(x^2+x-5)$

$\therefore 6x^2+6x-30$

$2(x-4)+7(x+6)$

$=2x-8+7x+42$

$=9x+34$

$\therefore$

Multiplying a Monomial by a Polynomial

① $x(x+2) = x^2 + 2x$

② $x(x-3) = x^2 - 3x$

③ $a(a+1) = a^2 + a$

④ $x(x-7) = x^2 - 7x$

$1x^1 \cdot 1x^1$

$1x^2$

(10) $3x(x+2) = 3x^2 + 6x$

(13) $3x(3+x) = 6x^1 + 3x^2$

$= 3x^2 + 6x$

(15) $-3x(x+11) = -3x^2 - 8x$

(17) $-y(y-3) = -y^2 + 3y$

(18) $x(x+3) - x(x-2)$

$= x^2 + 3x - x^2 + 2x$

$= 5x$

(21) $x(x+2) - 1(2x-2)$

$= x^2 + 2x - 2x + 2$

$= x^2 + 2$

(26) $2x(x-3) - x(x-5)$

$= \boxed{2x^2} - 6x \boxed{-x^2} + 5x$

$: 1x^2 - 1x$

(33) $3(x^2 + 2x - 5)$

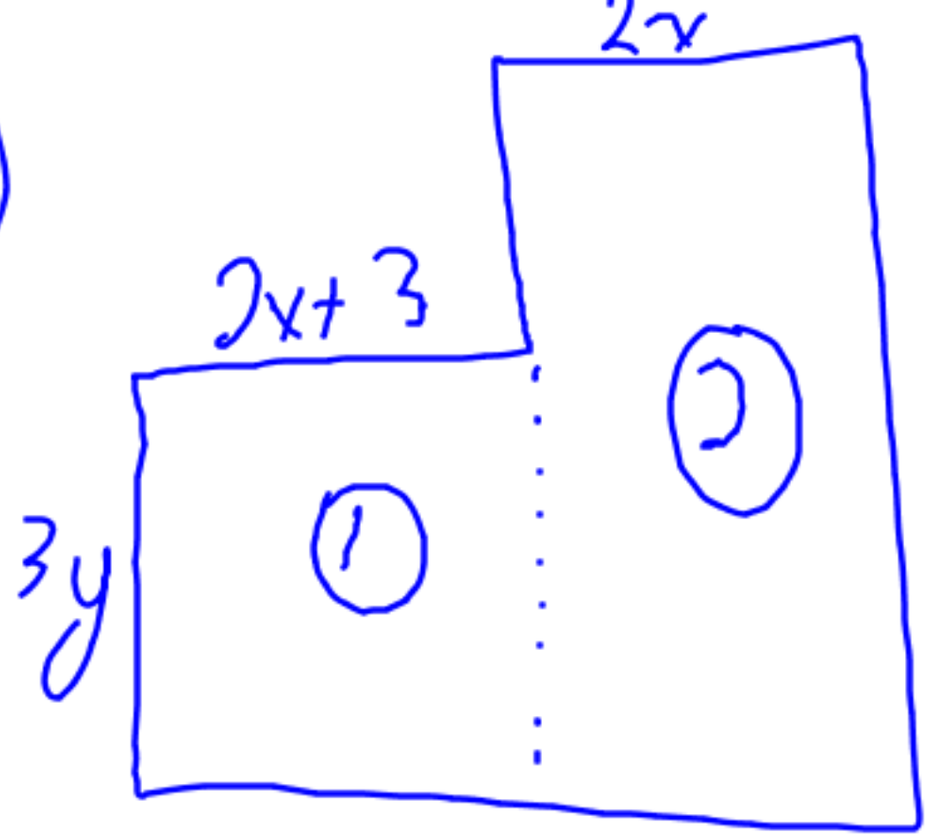
$: 3x^2 + 6x - 15$

(15) $5y(1-y) - 3(2y^2 - 4y - 3)$

$= 5y - 5y^2 + 6y^2 - 12y + 9$

$= y^2 - 7y + 9$

(17 b)



$A = l \times w$

$A_1 = 3y(2x+3)$

$= 6xy + 9y$

$A_2 = l \times w$

$= 2x(4y+7)$

$= 8xy + 14x$

Total Area $= A_1 + A_2$

$= 6xy + 9y + 8xy + 14x$

$= 14xy + 9y + 14x$

Dividing Monomials

Remember:

Simplify $\frac{10}{4} \div \frac{2}{5} \div \frac{5}{2}$

$\frac{35}{15} \div \frac{7}{3}$

Now:

Simplify $\frac{3x^2}{9x} \div \frac{1\cancel{x}x}{3\cancel{x}} \div \frac{1x}{3}$

$$\frac{4x^4y^2z^6}{12x^2yz^3} = \frac{1x^2yz^3}{3}$$

$$\frac{12x^2m^4y^3}{6xy^6} = \frac{2xm^{11}}{1y^4}$$

Homework

Multiplying a Monomial by a polynomial

Section 6.8