

HW: Worksheet

**Warm up:**

Simplify.

$$4a \cdot 2b = 8ab$$

$$4a \cdot 7 = 28a$$

$$1) \underbrace{5(3x - 2)} = 15x - 10$$

$$2) \underbrace{4a(2b + 7)} = 8ab + 28a$$

3) 5 more than half of a number is 12. What is the number?

$$\begin{array}{r} 5 + \frac{1}{2}x = 12 \\ -5 \qquad \qquad -5 \\ \hline \frac{2}{1} \left( \frac{1}{2}x \right) = (7) \frac{2}{1} \\ \hline x = 14 \end{array}$$

$$\begin{array}{l} x \cdot x \\ x^2 \end{array} \quad 3x(2x + 4)$$

$= 6x^2 + 12x$

$$5ab(7c - 9)$$

$$35abc - 45ab$$

What is the GCF of 15 and 20?

$$5 \qquad \begin{array}{r} 3 \quad 4 \\ 5 \overline{) 15 \quad 20} \end{array}$$

24 and 40?

8

$$\begin{array}{r} 3 \quad 5 \\ 2 \overline{) 6 \quad 10} \\ 4 \overline{) 24 \quad 40} \end{array}$$

30 and 54?

6

$$\begin{array}{r} 5 \quad 9 \\ 3 \overline{) 15 \quad 27} \\ 2 \overline{) 30 \quad 54} \end{array}$$

## Factoring

$$2(x + 5) = 2x + 10$$

$2(x + 5)$

Factor.

$$8x - 20 = 4(2x - 5)$$

$$6ab + 16b = 2b(3a + 8)$$

$$18ab^2 - 4ab + 24a = 2a(9b^2 - 2b + 12)$$

Simplify.

1)  $8(4x - 7)$

$32x - 56$

2)  $3(2x + 3)$

$6x + 9$

3)  $6w(5yz - 9z)$

$30wyz - 54wz$

4)  $5x(3y^2 + y - 8)$

$15xy^2 + 5xy - 40x$

Factor.

5)  $12n - 28$

$4(3n - 7)$

7)  $40x - 64xy$

$8x(5 - 8y)$

6)  $18ab + 30b$

$6b(3a + 5)$

8)  $9cd^2 - 18cd + 45c$

$9c(d^2 - 2d + 5)$

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