

Are You Ready? Possible Solutions

1. a. The pairs $2x^3$ and $2x$ have a GCF of $2x$; $3x^2$ and 3 have a GCF of 3 .
b. The pairs $21x^3$ and $7x$ have a GCF of $7x$; $2y$ and $6x^2y$ have a GCF of $2y$.
c. The pairs x and xy have a GCF of x ; 1 and y have a GCF of 1 .

OR

The pairs y and xy have a GCF of y ; 1 and x have a GCF of x .

- d. The pairs $10ax$ and $15x$ have a GCF of $5x$; $4ay$ and $6y$ have a GCF of $2y$.
2. a. $2x(x+1) = 2x(x) + 2x(1)$
 $= 2x^2 + 2x$
b. $(x+3)(x-2) = x(x-2) + 3(x-2)$
 $= x^2 - 2x + 3x - 6$
 $= x^2 + x - 6$
c. $3(x+2)(2x-5) = 3x(2x-5) + 2(2x-5)$
 $= 3(2x^2 - 5x + 4x - 10)$
 $= 3(2x^2 - x - 10)$
 $= 6x^2 - 3x - 30$

3.

	Product	Sum	Integers
Example	10	7	5 and 2
a.	20	-9	-5 and -4
b.	-12	1	-3 and 4
c.	-60	11	15 and -4

4. a.

$$15x^2y^2 = (3)(5)(x)(x)(y)(y)$$

$$25x^3y^2 = (5)(5)(x)(x)(x)(y)(y)$$

$$GCF = (5)(x)(x)(y)(y) = 5x^2y^2$$

$$15x^2y^2 + 25x^3y^2 = 5x^2y^2(3 + 5x)$$

b. The product is -9 . The sum is -8 . The numbers are -9 and 1 .

$$x^2 - 8x - 9 = (x - 9)(x + 1)$$

c. Take out GCF first: $2(x^2 + 3x - 10)$. The product is -10 . The sum is 3 . The numbers are -2 and 5 .

$$2x^2 + 6x + 20 = 2(x - 2)(x + 5)$$