

Greatest Common Factor

Unit 6 - Supplement

Greatest Common Factor (GCF)

- Is the biggest number that can be divided into both given numbers

- Examples

> 1.) 6, 14 GCF = 2

6: 1, 2, 3, 6

14: 1, 2, 7, 14

2.) 8, 12 GCF = 4

8: 1, 2, 4, 8

12: 1, 2, 3, 4, 6, 12

Examples (cont.)

3.) 20, 45 GCF: 5

20: 1, 2, 4, 5, 10, 20

45: 1, 3, 5, 9, 15, 45

5.) $6x^2$, $12x^3$

GCF: $6x^2$

4.) 6, 18, 27 GCF: 3

6: 1, 2, 3, 6

18: 1, 2, 3, 6, 9, 18

27: 1, 3, 9, 27

6.) $7a$, $14a^2$

GCF: $7a$

Examples (cont.) $27:1, 3, 9, \cancel{27}$

7.) $6ab^2, 10a^2b^3$

GCF: $2ab^2$

8.) $27x^4y^7z^3, 63x^2y^8z^4$

GCF: $9x^2y^7z^3$

Factoring- Using GCF

- Find the GCF
- Pull out the GCF from each term- write what is left over in ()

$$\frac{3x}{3} + \frac{6}{3}$$

- Examples:

- 1.) $3x + 6$

$$3(x+2)$$

- 2.) $5x - 35$

$$5(x-7)$$

Examples (cont.)

3.) $4x^2 - 12$

$$4(x^2 - 3)$$

4.) $6x^2 + 10x$

$$2x(3x + 5)$$

5.) $12x + 144x^2$

$$12x(1 + 12x)$$

6.) $5x - 10y$

$$5(x - 2y)$$

Examples (cont.)

7.) $6x^2 + 10x - 4$

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

8.) $13x^3 - 39x^2$

$$13x^2(x - 3)$$

Classwork

- ◉ Pg 307 # 1-9

HMWK

⑥2 2ab

◉ GCF Wkst #s 38-56 (2nd column)

22-34 (1st column)
→ evens

1. 128

2. 64

4. 32

8. 16

GCF wks + # 4-9

$$\textcircled{4} \boxed{3y^2} + \boxed{12}$$

$$3(\boxed{y^2} + \boxed{4})$$

$$\textcircled{5} 4a + 2b \\ 2(2a + b)$$

$$\textcircled{6} 5y - 9y^2$$

$$y(5 - 9y)$$

$$\textcircled{7} \boxed{9b + 5c}$$

$$\textcircled{8} 9a^2 + 3a$$

$$3a(3a + 1)$$

$$\textcircled{9} 7mn - 21m^3$$

$$7m(n - 3m^2)$$