

Section 4.2  
Greatest Common Factor

Goal: to find the greatest common factor of two or more whole numbers.

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List the factors:

36 = 1, 2, 3, 4, 6, 9, 12, 18, 36

20 = 1, 2, 4, 5, 10, 20

GCF = 4

What is the greatest common factor?

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Find the greatest common factor of the numbers.

1. 12, 30  
 12 = 1, 2, 3, 4, 6, 12  
 30 = 1, 2, 3, 5, 6, 10, 15, 30  
 GCF = 6

2. 21, 42  
 21 = 1, 3, 7, 21  
 42 = 1, 2, 3, 6, 7, 14, 21, 42  
 GCF = 21

3. 16, 32, 40  
 16 = 1, 2, 4, 8, 16  
 32 = 1, 2, 4, 8, 16, 32  
 40 = 1, 2, 4, 5, 8, 10, 20, 40  
 GCF = 8

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Give the GCF:

24, 45  
 24 = 1, 2, 3, 4, 6, 8, 12, 24  
 45 = 1, 3, 5, 9, 15, 45  
 GCF = 3

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Find the GCF:

$20x^2, 36x$   
 $20 = 1, 2, 4, 5, 10, 20$   
 $36 = 1, 2, 3, 4, 6, 9, 12, 18, 36$   
 GCF =  $4x$

$7xy^3, 28xy^2$   
 $7xy^2 \rightarrow xy^2 \rightarrow xy, xy^2$   
 $xy^3 \rightarrow xy^3 \rightarrow xy^2, xy^3$

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#12, 16, 18, 24,  
 28 - 34 evens,  
 38 - 48 evens

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