

# L2 Common Factors

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## Lesson 2 Common Factors

### Example 1 Factor.

a.)  $8x + 32$

$8(x + 4)$  ← factored form

b.)  $\frac{15x^3}{5} + \frac{20x^2}{5} + \frac{5}{5}$

$5(3x^3 + 4x^2 + 1)^*$   
GCF ↗

c.)  $2y(\cancel{x+3}) - 5(\cancel{x+3})$

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

### Example 2 Factor.

a)  $6 - 12z + 18z^2$

$6(1 - 2z + 3z^2)$

b)  $\frac{4a^3}{4a} + \frac{8a^2}{4a} + \frac{16a}{4a}$

$4a(a^2 + 2a + 4)$

**Example 3**  
**Factoring Polynomials in More than One Variable**

**Factor.**

$$\begin{aligned} \text{a) } & \frac{-20c^4d}{-5cd} - \frac{30c^3d^2}{-5cd} - \frac{25cd}{-5cd} \\ & -5cd(4c^3 + 6c^2d + 5) \end{aligned}$$

GCF

If the first term is  
negative the GCF  
will be negative

$$\begin{aligned} \text{b) } & \frac{7a^2b}{7ab} - \frac{28ab}{7ab} + \frac{14ab^2}{7ab} \\ & 7ab(a - 4 + 2b) \end{aligned}$$

Assign  
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# 3d, f, j  
4c, i, j  
5d, f, h, j  
Try 6a, e, i  
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