

Factoring - General Trinomials

**REMEMBER**

Write the trinomial in order. If the sign of the third term is positive, the signs of the factors will both be the same sign as that of the second term. If the sign of the third term is negative, the signs of the factors will be different.

**Example:** Factor:

$$x^2 - 5x + 6$$

$$(x - 3)(x - 2) \text{ ans.}$$

$$x^2 - 4x - 5$$

$$(x - 5)(x + 1) \text{ ans.}$$

<p>1. Factor: <math>x^2 - 12x + 36</math></p> <p>_____</p>	<p>7. If one factor of <math>x^2 - 7x - 18</math> is <math>x - 9</math>, what is the other factor?</p> <p>_____</p>
<p>2. Factor: <math>x^2 + 9x - 22</math></p> <p>_____</p>	<p>8. Factor: <math>a^2 + 14a + 49</math></p> <p>_____</p>
<p>3. Factor: <math>y^2 - 6y - 27</math></p> <p>_____</p>	<p>9. Factor: (a) <math>2y^2 - 11y + 12</math> _____</p> <p>(b) <math>5y^2 + 9y - 2</math> _____</p> <p>(c) <math>7x^2 + 2x - 5</math> _____</p>
<p>4. Factor: <math>a^2 + 10a + 25</math></p> <p>_____</p>	<p>10. Factor: <math>x^2 + 8x - 20</math></p> <p>_____</p>
<p>5. Factor: (a) <math>3x^2 - 5x - 2</math> _____</p> <p>(b) <math>2y^2 - 7y + 3</math> _____</p> <p>(c) <math>3x^2 - 2x - 5</math> _____</p>	<p>11. Factor: <math>c^2 - 4c - 45</math></p> <p>_____</p>
<p>6. Factor: <math>y^2 - 9y + 8</math></p> <p>_____</p>	<p>12. Factor: <math>x^2 + 20x + 100</math></p> <p>_____</p>

Chapter 3  
OPERATIONS IN ALGEBRA

Factoring - Mixed

<p>1. When the expressions <math>x^2 - 16</math> and <math>x^2 - 7x + 12</math> are factored, a common factor is:</p> <p>(1) <math>x^2</math>                      (3) <math>x - 4</math>  (2) <math>x + 4</math>                    (4) <math>x - 3</math></p> <p style="text-align: right;">_____</p>	<p>7. Factor:                      <math>2x^2 + 7x + 3</math></p> <p style="text-align: right;">_____</p>
<p>2. Factor</p> <p style="text-align: center;"><math>15x^3 - 10x^2 + 25x</math></p> <p style="text-align: right;">_____</p>	<p>8. Factor:                      <math>10x^2 - 7x - 12</math></p> <p style="text-align: right;">_____</p>
<p>3. Factor:                      <math>36a^2 - 1</math></p> <p style="text-align: right;">_____</p>	<p>9. Factor:                      <math>12x^2y^3 + 18x^3y^4</math></p> <p style="text-align: right;">_____</p>
<p>4. Factor:                      <math>x^2 - 6x - 27</math></p> <p style="text-align: right;">_____</p>	<p>10. Factor:                      <math>121 - 64x^2</math></p> <p style="text-align: right;">_____</p>
<p>5. If one factor of <math>x^2 - 13x + 22</math> is <math>(x - 11)</math>, what is the other factor?</p> <p>(1) <math>x + 2</math>                      (3) <math>x - 11</math>  (2) <math>x + 11</math>                    (4) <math>x - 2</math></p> <p style="text-align: right;">_____</p>	<p>11. Factor:                      <math>16x^2 + 62x + 21</math></p> <p style="text-align: right;">_____</p>
<p>6. Factor:                      <math>64x^2 + 36y^2</math></p> <p style="text-align: right;">_____</p>	<p>12. One of the factors of <math>8y^3 + 24y^2</math> is:</p> <p>(1) <math>24y^3</math>                      (3) <math>24y^2</math>  (2) <math>8y^3</math>                        (4) <math>8y^2</math></p> <p style="text-align: right;">_____</p>