

Review of Factoring Types

When you factor, remember to always check for a GCF first!

<p>Factoring A = 1 Factor: $x^2 + 3x - 18$</p> <p>$x \cdot x$ $1 \cdot 18$ $2 \cdot 9$ $3 \cdot 6$</p> <p>$(x - 3)(x + 6)$</p>	<p>Difference of Two Squares Factor: $x^2 - 16$</p> <p>$x \cdot x$ $4 \cdot 4$</p> <p>$(x + 4)(x - 4)$</p>
<p>Factoring A not 1 Factor: $2x^2 - 13x + 15$</p> <p>$2x \cdot x$ $1 \cdot 15$ $2 \cdot 5$</p> <p><i>same</i></p> <p>$(2x - 3)(x - 5)$</p> <p>$2x^2 - 10x - 3x + 15$ $2x^2 - 13x + 15$</p>	<p>Factoring by GCF Factor: $\frac{x^2 - 6x}{x}$</p> <p>$x(x - 6)$</p>
<p>Factoring with GCF & A = 1 Factor: $3x^2 - 3x - 60$</p> <p>GCF: 3 $\frac{3}{3} \frac{3}{3} \frac{60}{3}$</p> <p>$3(x^2 - x - 20)$</p> <p>$3(x - 5)(x + 4)$</p>	<p>Factoring with GCF and A not 1 Factor: $\frac{10x^2 - 22x + 4}{2}$</p> <p>GCF: 2 $\frac{10}{2} \frac{22}{2} \frac{4}{2}$</p> <p>$2(5x^2 - 11x + 2)$</p> <p>$2(5x - 1)(x - 2)$</p>

Zeros = x-intercepts

Algebra 1

Unit 9 - Quadratic Equations

Notes

Practice with Solving Quadratic Equations by Factoring

1. $0 = (x+2)(2x-1)$

$x+2=0$
 $\frac{x}{-2} = -2$
 $x = -2$

$2x-1=0$
 $\frac{2x}{2} = \frac{1}{2}$
 $x = \frac{1}{2}$

Factored Form: $(x+2)(2x-1)$

Zeros: $x = -2, x = \frac{1}{2}$

2. $y = (x-3)(x-1)$

Factored Form: $(x-3)(x-1)$

Zeros: $x = 3, x = 1$

3. $0 = x^2 - 14x + 48$

$x \quad x \quad 6 \quad 8$

$(x-6)(x-8)$

Factored Form: $(x-6)(x-8)$

Zeros: $x = 6, x = 8$

4. $y = x^2 - 6x + 9$

Factored Form: _____

Zeros: _____

5. $x^2 + 6x + 8 = 0$

$x \cdot x \quad 4 \cdot 2$

Factored Form: $(x+4)(x+2)$

Zeros: $x = -4, x = -2$

6. $5x = x^2 - 6$

$0 = x^2 - 5x - 6$
 $x \quad x \quad 6 \quad 1$

Factored Form: $(x-6)(x+1)$

Zeros: $x = 6, x = -1$

7. $x^2 = 2x + 1$

$0 = x^2 - 2x - 1$

Factored Form: $(x+1)(x+1)$

Zeros: $x = -1$

8. $y = x^2 - 9$

Factored Form: _____

Zeros: _____