SOLVING QUADRATIC EQUATIONS



Coloring Activities

About this Activity:

Your Algebra 2 students will solve 12 Quadratic Equations. There are four questions to solve by each of the following methods:

1. Solve by Factoring
2. Solve by Completing the Square
3. Solve by using the Quadratic Formula

Solutions include, real, rational, and complex roots. Each question includes three choices and the color at the bottom of each choice will indicate the color for the corresponding picture page by Creative Clips.

This is a fun approach to review of Quadratic Equations before Winter Break.

An answer key is provided as well as a completed coloring page key.

Have a wonderful holiday season!

Jean

Flamingo MATH
Jean Adams

Name _____ Date _____

Solving Quadratic Equations

Directions: Solve each equation by the indicated method. Show ALL steps! Color the corresponding areas on the coloring sheet.

1 **Solve by factoring:** $x^2 - 4x - 32 = 0$

$\{-4, -8\}$ Pink	$\{-4, 8\}$ Green	$\{-5, 13\}$ Dk. Blue

2 **Solve by factoring:** $2x^2 + 5x - 3 = 0$

$\left\{-3, \frac{1}{2}\right\}$ Gold	$\{-3, 0\}$ Purple	$\{-2, -5\}$ Red

3 **Solve by factoring:** $2x^2 + 18x = 44$

$\{-2, 0\}$ Purple	$\{1, -24\}$ Yellow	$\{-11, 2\}$ Red

4 **Solve by factoring:** $5y^2 + 80 = 0$

$\{-4, 4\}$ Green	$\{-4i, 4i\}$ Purple	$\{-2i, 2i\}$ Blue

5 **Complete the Square:** $x^2 - 6x - 4 = 0$

$\{1, 3\}$ Pink	$\{3 \pm \sqrt{5}\}$ Yellow	$\{3 \pm \sqrt{13}\}$ Orange

6 **Complete the Square:** $m^2 + 25 = 6m$

$\{3 \pm 4i\}$ Yellow	$\{3 \pm i\sqrt{2}\}$ Purple	$\{-3 \pm 2i\}$ Pink

7 **Complete the Square:** $2x^2 - 4x - 8 = 0$

$\{1 \pm \sqrt{11}\}$ Green	$\{-3, -1\}$ Orange	$\{1 \pm \sqrt{5}\}$ Pink

8 **Complete the Square:** $n^2 - 10n = 7$

$\{5 \pm 3\sqrt{2}\}$ Red	$\{5 \pm 4\sqrt{2}\}$ Light Blue	$\{5 \pm 3\sqrt{3}\}$ Yellow

9 **Quadratic Formula:** $x^2 + 2x + 7 = 0$

$\{-1 \pm i\sqrt{6}\}$ Dk. Green	$\{1 \pm \sqrt{6}\}$ Dk. Blue	$\{1 \pm 2i\sqrt{6}\}$ Orange

10 **Quadratic Formula:** $-2x^2 + 12x - 8 = 0$

$\{3 \pm \sqrt{5}\}$ Dk. Blue	$\{-3 \pm \sqrt{5}\}$ Green	$\{3 \pm \sqrt{13}\}$ Gold

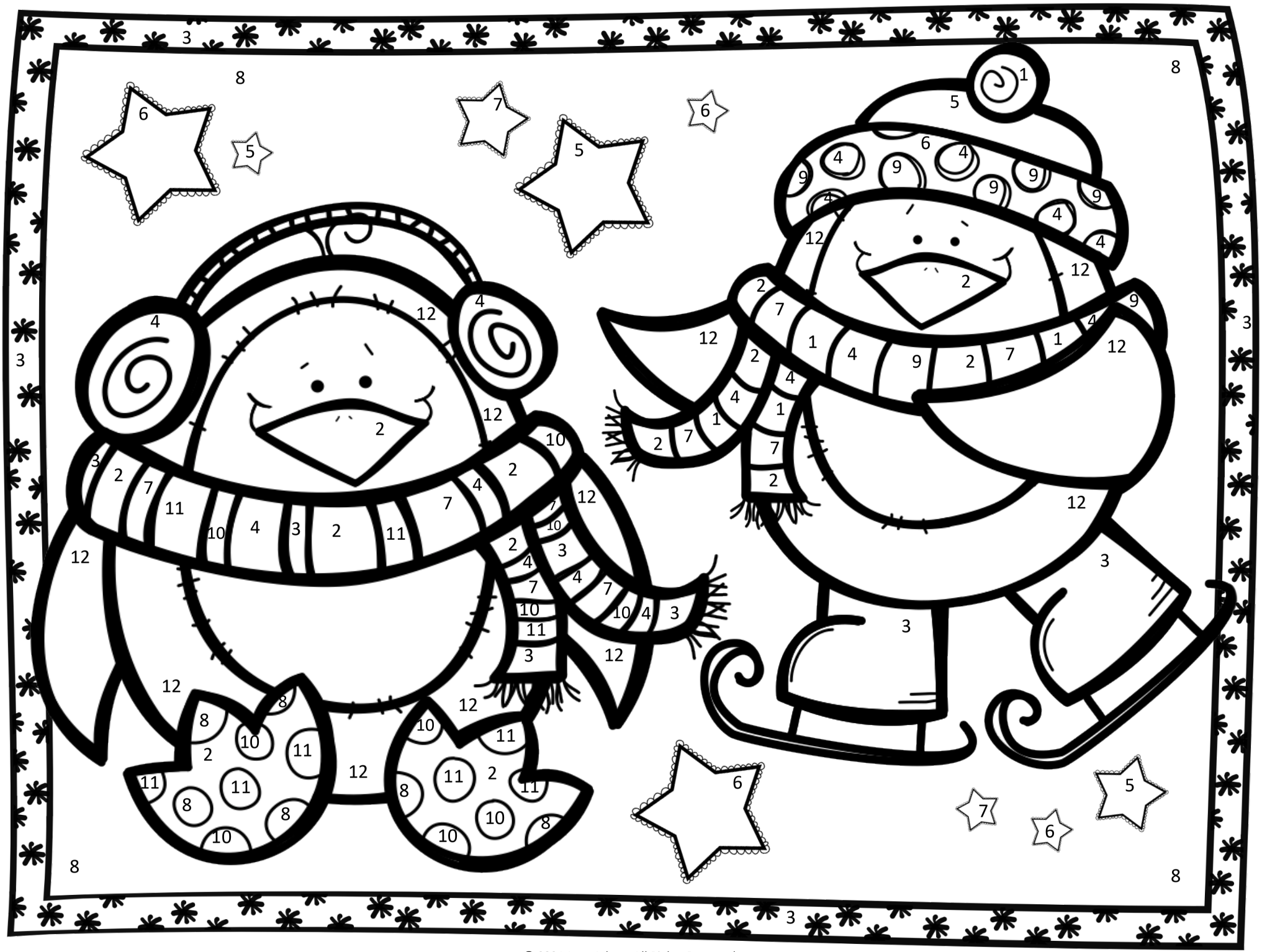
11 **Quadratic Formula:** $-x^2 + 4x - 9 = 0$

$\{2 \pm i\sqrt{5}\}$ Light Green	$\{2 \pm 2i\sqrt{5}\}$ Red	$\{-2 \pm i\sqrt{5}\}$ Dk. Blue

12 **Quadratic Formula:** $2x^2 + 2x - 1 = x^2 - 4$

$\{1 \pm \sqrt{2}\}$ White	$\{-1 \pm i\sqrt{2}\}$ Black	$\{-2 \pm i\sqrt{2}\}$ Pink

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