

9-Square Puzzles

This is a group activity that works well with groups of three or four students. Each group will get a packet that contains 9 square cards. On each side of the square is a math question or an answer. Students solve the puzzle by matching up questions on one square to answers on another square. When they are finished they should have a larger 3X3 square made up by the 9 puzzle pieces. There are some answers and questions on the edges that do not have a match. Each puzzle piece has a letter in the middle that makes it easier to check for the teacher.

This is a good activity for use with topics that students need extra practice to master such as factoring, simplifying square roots, learning the trig identities, etc. The questions should be easy for students to solve without using paper or calculators.

To make the puzzle pieces, run copies of the puzzle on 65-lb heavyweight card stock. Copy each different puzzle on a different color card stock so that the first game is all the same color, the second game is the same color, etc. Laminate the puzzles before you cut them into pieces. Put each set into a zip-lock bag. Leave one puzzle intact to use as an answer key.

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Greatest Common Factor

2-A

<p>A</p> $4ab - 4ac$ $7(a+3)$ $-x - y$ $-a + b$	<p>G</p> $4ab + c$ $2z + 2qz + 2c$ $-(x+y)$ $7(a-2)$	<p>D</p> $3m - 3n$ $2x^2 + 6x^3$ $2(a+b+c)$ $2x - x^2$
<p>J</p> $7a + 14$ $-2(a+b+c)$ $- (a-b)$ $4ab + 4ac$	<p>B</p> $7a - 14$ $-2a - 2b - 2c$ $4t - 14t$ $2x^2(x+1)$	<p>H</p> $x^2 + y^2$ $7(x-2y)$ $x(2-x)$ $3(m-3n)$
<p>F</p> $a + b$ $4a(b+c)$ $-4(2x+3)$ $7x + 14y$	<p>F</p> $2x^3 + 2x^2$ $-8x - 12$ $2x^2(1-3x)$ $a - b$	<p>C</p> $2a - 2b + 2c$ $3m - 9n$ $2x^2 - 6x^3$ $8x - 12$

Difference of Squares

2-B

$$4x^2 - 9 = (2x - 1)(2x + 1)$$

B

$$4x^2 - 9 = (2x - 3)(2x + 3)$$

F

$$4x^2 - 9 = (x + 5)(x + 5)$$

G

$$4x^2 - 9 = (x - 3y)(x + 3y)$$

A

$$4x^2 - 9 = (x - 3)(x + 3)$$

H

$$4x^2 - 9 = (2 - x)(2 + x)$$

I

$$4x^2 - 9 = (2x + 7)(2x - 7)$$

D

$$4x^2 - 9 = (3x + 2)(3x - 2)$$

E

$$4x^2 - 9 = (x + y)(x - y)$$

J

Trinomials

2-C

$x^2 + 2x + 35$ $x^2 + 25$ $x^2 - y^2$ $(5+x)(z+x)$ $(-2)(x+x)$ B	$x^2 + 3x - 10$ $x^2 + y^2$ $x^2 - 2x - 35$ $(5-x)(z+x)$ $(x+2)(x+5)$ E	$x^2 - 3x - 10$ $x^2 + 2x - 35$ $21x + 14$ $x^2 + 5x + 14$ A
$x^2 + 3x - 4$ $(x-y)(x+y)$ $x^2 - 8x + 15$ $x^2 - 5x - 14$ $(x-7)(x+2)$ $(9+x)(1+x)$ F	$x^2 - 4x - 21$ $(x+5)(x-7)$ $12x^2 - 4x - 21$ $(x-1)(x+6)$ J	$x^2 + 5x - 6$ $7(3x+2)$ $x^2 - 49$ $x^2 + 4x - 21$ H
$x^2 - 2x + 35$ $(x-5)(x-3)$ $(x+y)(x+y)$ $(x-3)(x-10)$ C	$x^2 - 13x + 30$ $(x+3)(x-7)$ $x^2 - 10x - 25$ $(4-x)(1+x)$ G	$x^2 - 3x - 4$ $(x+7)(x-7)$ $(x-3)(x+10)$ $x^2 + 10x - 25$ D