

MathLinks

BIG SQUARE PUZZLES

Big Square Puzzles are a great way to practice arithmetic and algebra ideas. To get started, pick and print a puzzle, cut up the pieces, and mix them up. To solve the puzzle, arrange the square pieces so that the expressions or equations on the pieces' edge are equal to each other. For extra fun, print the puzzle template at the end of this file and make your own puzzle for your parents to try!

BIG SQUARE PUZZLE

INTEGER ADDITION AND SUBTRATION

$5 + 5$ $5 + 5$	10 $5 + (-5)$	$4 - 7$ $6 + 1$	2 $9 + 5$
$12 - (-6)$ 18	$7 - (-4)$ 11	7 $-6 - (-1)$	$-3 + 0$ $-5 + 3$
8 $-6 - 2$	4 $-6 + 2$	5 $-1 - 4$	$-1 - (-6)$ 5
3 2	$5 - 3$ 0	3 $-5 + 5$	$0 + 3$ $-3 - 5$
$-1 + 4$ $4 + 2$	$-6 - 1$ -3	$-4 - (-7)$ $-5 - 5$	3 $1 - 6$
$-7 + 4$ -10	$-5 - 5$ -5	$9 - 6$ $1 - 6$	$1 - 6$ -5

BIG SQUARE PUZZLE FRACTION ADDITION AND SUBTRACTION 2

0 $-3\frac{2}{3}$	$1 - \frac{1}{3}$ $\frac{1}{3} - 1$ $4 - 4$ $\frac{1}{3} - 1$	$\frac{7}{12}$ $\frac{2}{3}$
$4\frac{1}{2} + \frac{3}{7} + 5\frac{1}{2}$ $\frac{1}{5} + \frac{2}{4} + 1$ $\left(\frac{2}{2}\right)$ $\frac{4}{1} - 2 + 2\frac{1}{4}$	$1 - \frac{1}{5}$ $3\frac{1}{2}$ $-\frac{7}{12}$	$\frac{5}{6} - \frac{1}{4}$ $\frac{1}{4} + \frac{1}{4}$ $-\frac{1}{2}$ $\frac{6}{10} + \left(-\frac{1}{4}\right)$
$10\frac{7}{3}$ $\frac{7}{12}$	$-2\frac{1}{4} + 1\frac{2}{3}$ $-1\frac{2}{3} + 2\frac{1}{4}$	$-\frac{7}{12}$ $-3\frac{11}{12}$ $-2\frac{1}{4} + 6\frac{1}{6}$

BIG SQUARE PUZZLE

SOLVING EQUATIONS WITH RATIONAL COEFFICIENTS 1

$x = -2$ $-3x + 7 = 1$	$x = 2$ $x = -0.5$	$x = -8$ $13 = 9x$	$-2(x-1) = -3$ $-5x - 4 = -3$
$x = 2.5$ $5x - 3 = 6$ $x + 3 = -8$	$x = \frac{9}{5}$ $\frac{5}{8} = x$ $6x - 8x + 5 = 11$	$4 = \frac{5x}{2}$ $x = \frac{4}{5}$ $x = \frac{9}{13}$	$x = -6$ $7 - x^2 = 5$ $-6 = 2 + 4x$
$2(x+9) = 2$ $x = 25$ $\frac{2}{3}x - 1$	$x = -3$ $\left(\frac{2}{9}\right)x = 10$ $\frac{6}{8} = x$ $2 + (10 + x) = 14$	$x = -4$ $x = \frac{4}{5}$ $x = \frac{4}{5}$	$x = -2$ $x + 1 = -3$ $8x - 4 = -8$
$x = -8$ $0 = 3x - 6$	$x = 2$ $x - \frac{8}{9} = 0$	$\frac{8}{6} = x$ $-8x + 4 = -5$ $5x + 9 = 5$	$x = \frac{1}{2}$ $9 = 3 - 2x$ $3 = x$

BIG SQUARE PUZZLE

SOLVING EQUATIONS WITH RATIONAL COEFFICIENTS

$x = 1$ $-5 = 4 + x$	$x = -9$ $x + 3 = 2x - x - 4$	$x = 8$ $-8 + x = 0$	$x = 5$ $12 = x + 7$ $5 = x + 4$
$x = -6$ $0 = 4 - 4x$ $3 - 6x - x = -53$	$x = 8$ $0 = 7x + 2x - 9$ $17 = -6x + 3x + 10$ no solutions	$x = 9$ $x = 11$ $-6 - 0.25x = 63 - 6x$	$x = 8$ $4x = 4$ $x = 1$ $-12 + 24x = -1x + 188$
$x = -5$ $6x + 9 = -45$ $9 = x$	$x = 1$ $-1 + 4x = 6x + 11$ $11 = x$ $-54 = 3x - 7x - 10$	$x = 0$ $10 + 3x - 4x = -1$ $-x + 4 = -3x + 26$ $11 = x$	$x = 1$ $0.25x = 1$ $-5x - 4 = 45.5 - 0.5x$
$x = 6$ $-4x - 7 = 13$	$x = 11$ $10 - 2x = -8$	$x = 2$ $2.5 = x + 0.5$	$x = 4$ $6x - 3 = 21$

BIG SQUARE PUZZLE SOLVING LINEAR SYSTEMS

$4x+2y=30$ $-4x-y=-33$	$3x-y=-11$ $5x-y=-19$	$-2x+y=27$ $2x+5y=27$
$x=-9, y=8$	$x=9, y=6$	$x=-9, y=9$
$3x+3y=-3$ $-3x+2y=43$	$3x+6y=51$ $x+3y=25$	$2x+2y=20$ $2x-4y=-26$
$x=1, y=-4$	$x=8, y=6$	$x=1, y=8$
$2x+2y=-6$ $-6x-5y=14$	$4x+y=24$ $-5x-y=-30$	$x-5y=29$ $5x+3y=5$
$x=4, y=3$	$x=6, y=0$	$x=-2, y=-9$
$x=-y+7$ $-2x-y=-11$	$y=-4x-17$ $-y+2x=5$	

BIG SQUARE PUZZLE EXPONENTS

$8^2 \times 10^4$	$10^3 + 10^1$	8×10^6	$8,000,000,000$
10,000	5^2	-9-64	$1^{22} \times 6^2$
10^4	25	$(-4)^3$	36
$\left(\frac{1}{2}\right)^3$	$\frac{1}{8}$	64	$\frac{81}{100}$
0	$(-10)^7$	1,000,000,000,000	$\frac{100^4}{1^{78}}$
0^{17}	-10,000,000	$(-100)^6$	100,000,000
0	0^{36}	-3-	$(-3)^1$
0	0.4^2	$(-3)^3$	$\frac{5^2}{2^6}$
$\frac{10^1}{0^{39}}$	0.16	$\left(\frac{3}{2}\right)^2$	$\frac{64}{25}$
$\frac{8}{3}$	$\frac{6^1}{2^4}$	$\frac{(-1)^{63}}{1^{28}}$	$\frac{1^{74}}{1^8}$
	-1-	1	

BIG SQUARE PUZZLE TEMPLATE

