

Directions: This game is very similar to traditional Tic Tac Toe. Instead of the playing board being 3 blocks wide and 3 blocks tall, this one is 5 squares in each direction. To "win" this game, you must get 5 problems COMPLETELY correct in either the HORIZONTAL or VERTICAL direction. Diagonal doesn't count in this game! Once you think you have the correct answers for your row or column, have the teacher check their accuracy. If YOU are completely correct, you get a circle and win the square. If you are not completely correct, the teacher gets to block you with an X. When you have won the game, your teacher will keep this sheet, and you will be able to start on the next task. Take your time, be careful, and good luck!!

<p>Factor:</p> $2x^2 + 8x + 6$ $2(x^2 + 4x + 3)$ $2(x+3)(x+1)$	<p>Simplify:</p> $\frac{55x^6y^3}{70x^5y^7} = \frac{11x}{14y^4}$	<p>Multiply:</p> $\frac{9x^2 \cdot 8^2}{412 \cdot 8x} = \frac{2x}{2}$ $= x$	<p>Divide:</p> $\frac{5x+15}{3x} \div \frac{x+3}{9x}$ $\frac{5(x+3) \cdot 39x}{7x \cdot x+3}$ $\frac{15}{1}$	<p>Multiply:</p> $\frac{4x}{x+1} \cdot \frac{x^2-6x-7}{x^3+7x^2}$ $\frac{4x \cdot (x-7)(x+1)}{x^2(x^2+7x)}$ $\frac{4(x-7)}{x(x+7)}$
<p>Multiply:</p> $\frac{7x^4 \cdot 8y}{14x \cdot 5y^6} = \frac{28x^3}{35y^5}$	<p>Factor:</p> $5x^2 + 5x + 10$ $5(x^2 + x + 2)$	<p>Simplify:</p> $\frac{90x^3yz^2}{180y^4z} = \frac{1x^3z}{2y^3}$	<p>Multiply:</p> $\frac{4x}{x^2-25} \cdot \frac{x-5}{8x^2+12x}$ $\frac{4x \cdot (x-5)}{(x-5)(x+5) \cdot 4x(2x+3)}$ $\frac{1}{(x+5)(x+3)}$	<p>Divide:</p> $\frac{6x-14}{x^2-1} \div \frac{3x-7}{5x+1}$ $\frac{2(3x-7) \cdot 5x+1}{(x-1)(x+1) \cdot 3x-7}$ $\frac{2(5x+1)}{x-1}$
<p>Divide:</p> $\frac{x+4}{x^2+5x+4} \div \frac{1}{3x+3}$ $\frac{(x+4) \cdot 3(x+1)}{(x+1)(x+4) \cdot 1}$ 3	<p>Simplify:</p> $\frac{16x^2y^3z}{30x^4y^5z}$ $\frac{8x^2y^3}{15y^2z}$	<p>Factor:</p> $4x^2 - 36$ $4(x^2 - 9)$ $4(x+3)(x-3)$	<p>Simplify:</p> $\frac{x^2+4x+4}{x^2-4}$ $\frac{(x+2)(x+2)}{(x-2)(x+2)}$ $\frac{x+2}{x-2}$	<p>Multiply:</p> $\frac{x+9}{x^2-81} \cdot \frac{x-9}{3x}$ $\frac{x+9}{(x-9)(x+9)} \cdot \frac{x-9}{3x}$ $\frac{1}{3x}$
<p>Multiply:</p> $\frac{3x}{8x^2} \cdot \frac{4x^4}{3x^8}$ $\frac{12x^5}{24x^{10}} = \frac{1}{2x^5}$	<p>Divide:</p> $\frac{x^2-8x+15}{x^2-3x} \div (3x-15)$ $\frac{(x-3)(x-5)}{x(x-3)} \cdot \frac{1}{3(x-5)}$ $\frac{1}{3x}$	<p>Factor:</p> $2x^3 + 12x^2 + 18x$ $2x(x^2 + 6x + 9)$ $2x(x+3)(x+3)$	<p>Factor:</p> $2x^2 - 8$ $2(x-2)(x+2)$	<p>Simplify:</p> $\frac{2x^2+6x}{8x^2+24x}$ $\frac{2x(x+3)}{8x(x+3)} = \frac{1}{4}$
<p>Simplify:</p> $\frac{4x^2-9}{10x+15}$ $\frac{(2x-3)(2x+3)}{5(2x+3)}$ $\frac{2x-3}{5}$	<p>Multiply:</p> $\frac{4x-8}{x^2-4x+4} \cdot (6x-12)$ $\frac{4(x-2) \cdot 6(x-2)}{(x-2)^2 \cdot 6(x-2)}$ $\frac{24}{1}$	<p>Divide:</p> $\frac{x^2-4x+3}{2x} \div \frac{x-1}{2}$ $\frac{(x-3)(x-1) \cdot 2}{2x \cdot (x-1)}$ $\frac{x-3}{x}$	<p>Divide:</p> $\frac{36x}{10y} \div \frac{12x^4}{15xy^3}$ $\frac{3 \cdot 36x}{200y} \cdot \frac{3 \cdot 15xy^3}{12x^4}$ $\frac{9x^2y^3}{2x^3y}$	<p>Factor:</p> $x^2 - 12x - 28$ $(x-14)(x+2)$

$$= \frac{9y^2}{2x^2}$$

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