

Change the following into appropriate mathematical statement (expressions, equations, or inequalities).

1.) Ten less than the product of three and x is greater than twenty. _____

Simplify the following expression. If your answer is not an integer, express it as reduced fraction.

2.) $\frac{20 - 4(5 - 3^2)}{11 - 7 + 2}$

Solve the following systems of linear equations.

3.) $\begin{cases} x + 2y = -8 \\ 2x - 5y = 2 \end{cases}$

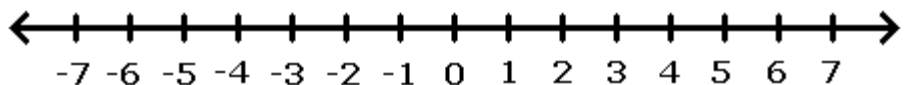
In the following problems, solve the equations. If your answer is not an integer, express it as reduced fraction.

4.) $4c - 6 = 2(5 - 7c)$

5.) $w + (7w - 3) + (4w - 9) = 180$

Solve the following inequality and graph the solution on the number line provided.

6.) $5 - 2x \geq 4x - 7$



Factor the following quadratic expressions.

7.) $2a^2 - 11a + 5$

Factor and solve.

8.) $x^2 + 5x - 24 = 0$

The following problems contains a line in 3 forms: a **table** of values, an **equation**, and a **graph**. One or more parts is missing from each problem. Complete any of the missing information.

Problem #	Table of values (x, y)	Equation ($y = mx + b$ form)	Graph												
9.)	<table border="1"> <thead> <tr> <th data-bbox="285 1398 407 1465">x</th> <th data-bbox="407 1398 548 1465">y</th> </tr> </thead> <tbody> <tr> <td data-bbox="285 1465 407 1556">-4</td> <td data-bbox="407 1465 548 1556"></td> </tr> <tr> <td data-bbox="285 1556 407 1646">-2</td> <td data-bbox="407 1556 548 1646"></td> </tr> <tr> <td data-bbox="285 1646 407 1736">0</td> <td data-bbox="407 1646 548 1736"></td> </tr> <tr> <td data-bbox="285 1736 407 1827">2</td> <td data-bbox="407 1736 548 1827"></td> </tr> <tr> <td data-bbox="285 1827 407 1917">4</td> <td data-bbox="407 1827 548 1917"></td> </tr> </tbody> </table>	x	y	-4		-2		0		2		4			
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-4															
-2															
0															
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Scoring Rubric

#	Topic(s)	Points
1	Words → Equations, expressions, inequalities	Vocab (Product = Multiplication) Less than → After 3x not before (3x -10 vs 10-3x) Inequality symbol (>)
2	Order of operations	Exponent with negative (not 5+9) Proper order in numerator (36) Subtraction before addition in denominator (6 not 2)
3	Systems of 2 linear equations	Method chosen (elimination or substitution both work here) If substitution, correct signs and sub If elimination, correct signs to cancel Solving for both variables, not just one
4	Solving single variable linear equations	Distributive property correctly applied Isolated variable Solved and reduced fraction solution
5	Solving single variable linear equations	Combine like terms Correct order to solve
6	Linear inequality	Isolated variable Swapped inequality when dividing by negative number Graphed correctly with closed circle and proper direction
7	Factoring quadratic polynomials	Leading coefficient of 1 Correct factor pair Answer in factored form
8	Factoring quadratic polynomials	Leading coefficient of not equal to 1 Correct factor pair Answer in factored form
9	Factoring and solving quadratic polynomials	Leading coefficient of 1 Correct factor pair Written in factored form Solutions listed after factoring with correct signs
10	Linear functions and slope	Calculated slope Identified y-intercept Written in slope-intercept form Ordered pairs listed including one that would not fit on graph