Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block:\_\_\_

Test: Unit8 (1/2)

Practice

Quadratic formula.

There are 7 questions in this quiz, each of equal value.

Standard time for the quiz is 30 minutes (or to the end of the block).

Four operations calculator is allowed.

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| 1. Solve by factoring (zero product property)$$3x^{2}-11x+6=0$$ | 1'. Solve by factoring (zero product property)$$x^{2}-5x= -4$$ |
| 2. Solve by using the quadratic formula$$x^{2}+3.75=4x$$ | 2'. Solve by using the quadratic formula$$2x^{2}-4.5=0$$ |

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| 3. Write a quadratic equation for which the solutions satisfy: (a) Sum of solutions is -3 (b) Product of solution is $\frac{1}{4}$ | 3'. Write a quadratic equation for which there is only one solution, equal to $3$. 3''. Write a quadratic equation with two solutions, 3 and 7. |
| 4. Determine the type and number of solutions:$$2x^{2}-3x+4=0$$ | 4'. Determine the type and number of solutions:$$3x^{2}-18x+27=0$$ |

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| 5. The hypotenuse of a right triangle is 25km long. The length of one leg is 17km less than the other. Find the lengths of the legs.  | 5'. Given 3 consecutive integers, the product of the first-two is 7 more than the third integer. Find the 3 integers. |

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| 6. Write the equation of the line with slope $m=-2$ that goes through the point $\left(x,y\right)=(3,5)$  | 6'. Solve:$\left.\begin{array}{c}2x=y-5\\8=4y-2x\end{array} \right\}$  |
| 7.a. Given the line $y = \frac{1}{3}x + \frac{10}{3}$ , find the perpendicular line that goes through the origin $\left(0,0\right)$.b. Find the intersection point of these two lines. |

8. Given the parabola

 $y=\frac{1}{2}x^{2}+1$

and the line:

 $y=x+1$

Find the point(s) of intersection between the parabola and the line.

8'. Given the parabola

 $y=\frac{1}{2}x^{2}+1$

and the line:

 $y=x+0.5$

Find the point(s) of intersection between the parabola and the line.

=== End ====