

Student Name: _____

Date: _____

Period #: _____

Unit 1: Quiz 9

Manipulation of Algebraic Expressions & Equations

Solve the following quadratics

1. $x^2 - 14x + 45 = 0$

2. $x^2 = 15 + 2x$

3. $x^2 - 10x + 35 = 7x - 35$

4. $16x = x^2 + 63$

5. Solve for the unknown variable (*listed under the word FIND*):

Problem #1	
$v_x = v_{x_0} + a_x t$	v_x : Velocity of the object at time t ($\frac{m}{s}$) v_{x_0} : Initial velocity of the object ($\frac{m}{s}$) a_x : Acceleration of the object ($\frac{m}{s^2}$) t : time interval in which motion occurs (s)
Given $v_{x_0} = 5 \frac{m}{s}$ $a_x = 2 \frac{m}{s^2}$ $v_x = 15 \frac{m}{s}$	Find $t = ?$
Solution	
Problem #2	
$x = x_0 + v_{x_0} t + \frac{1}{2} a_x t^2$	x : Position of the object at time t (m) x_0 : Initial position of the object (m) v_{x_0} : Initial velocity of the object ($\frac{m}{s}$) a_x : Acceleration of the object ($\frac{m}{s^2}$) t : time interval in which motion occurs (s)
Given $x_0 = 1 m$ $v_{x_0} = 3 \frac{m}{s}$ $a_x = 2 \frac{m}{s^2}$ $x = 25 m$	Find $t = ?$
Solution	