

# ALEKS<sup>®</sup> Test 2 #2

College Algebra with Trigonometry / Math 005 201608 - 09 (Prof. Sitaraman)

Student Name/ID:

**Instructor Note:**

FALL 2016 MATH 005 SECTIONS 7,8 AND 9-----NO CALCULATORS OR CELLPHONES-----  
SHOW ALL WORK SO I CAN GIVE EXTRA CREDIT-----  
ANSWERS WITHOUT STEP BY STEP SOLUTIONS GETS ONLY 40 PERCENT-----  
FIRST 4 PROBLEMS 20 POINTS EACH, LAST TWO 10 POINTS EACH

1. Two cars leave towns 1000 kilometers apart at the same time and travel toward each other. One car's rate is 14 kilometers per hour more than the other's. If they meet in 5 hours, what is the rate of the faster car?

Do not do any rounding.

kilometers per hour

2. Solve for  $v$ .

$$4v^2 = -20v - 25$$

3. Solve the quadratic equation by completing the square.

$$x^2 - 8x + 9 = 0$$

First, choose the appropriate form and fill in the blanks with the correct numbers.  
Then, solve the equation. If there is more than one solution, separate them with commas.

<b>Form:</b> <input type="radio"/> $(x + \square)^2 = \square$ <input type="radio"/> $(x - \square)^2 = \square$
<b>Solution:</b> $x = \square$

4. Solve for  $w$ , where  $w$  is a real number.

$$\sqrt{7w - 10} = w$$

5. Solve for  $u$ .

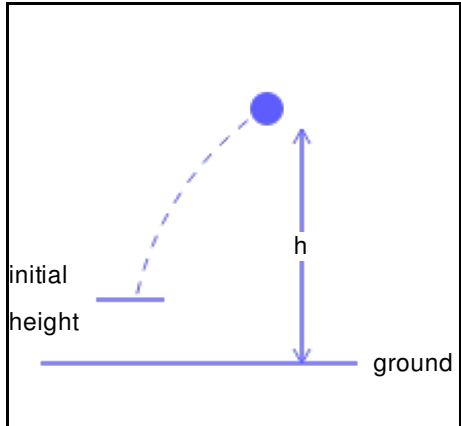
$$2|u| = -8$$

6. A ball is thrown from an initial height of 1 meter with an initial upward velocity of 5 m/s. The ball's height  $h$  (in meters) after  $t$  seconds is given by the following.

$$h = 1 + 5t - 5t^2$$

Find all values of  $t$  for which the ball's height is 2 meters.

Round your answer(s) to the nearest hundredth.  
(If there is more than one answer, use the "or" button.)



## Test 2 #2 Answers for class Math 005 201608 - 09

1. 107 kilometers per hour

2.  $-\frac{5}{2}$

3.

**Form:**

$(x + \square)^2 = \square$

$(x - 4)^2 = 7$

**Solution:**

$$x = 4 + \sqrt{7}, 4 - \sqrt{7}$$

4.  $w = 2, 5$

5. No solution

6.  $t = 0.28$  seconds

or  $t = 0.72$  seconds