

# ALEKS<sup>®</sup> Test 2 #1

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. Jessica drove to the mountains last weekend. There was heavy traffic on the way there, and the trip took 12 hours. When Jessica drove home, there was no traffic and the trip only took 8 hours. If her average rate was 20 miles per hour faster on the trip home, how far away does Jessica live from the mountains?

Do not do any rounding.

miles

2. Solve for  $u$ .

$$30u = 9u^2 + 25$$

3. Solve the quadratic equation by completing the square.

$$x^2 - 8x + 3 = 0$$

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  $v$ , where  $v$  is a real number.

$$\sqrt{3v + 28} = v$$

5. Solve for  $u$ .

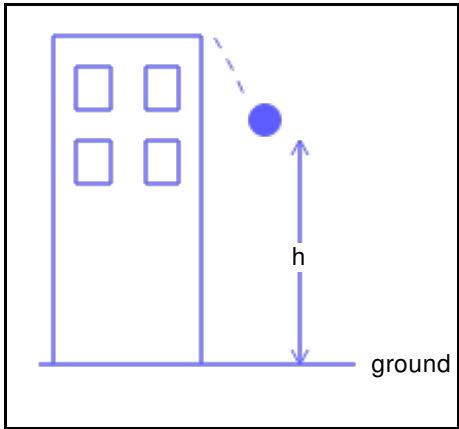
$$|u| - 22 = -14$$

6. A ball is thrown from a height of 255 feet with an initial downward velocity of 21 ft/s. The ball's height  $h$  (in feet) after  $t$  seconds is given by the following.

$$h = 255 - 21t - 16t^2$$

How long after the ball is thrown does it hit the ground?

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



# Test 2 #1 Answers for class Math 005 201608 - 09

1. 480 miles

2.  $\frac{5}{3}$

3.

**Form:**

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

$(x - 4)^2 = 13$

**Solution:**

$$x = 4 + \sqrt{13}, 4 - \sqrt{13}$$

4.  $v = 7$

5.  $u = 8, -8$

6.  $t = 3.39$  seconds