

# Honors Geometry Chapter 8 Extra Practice

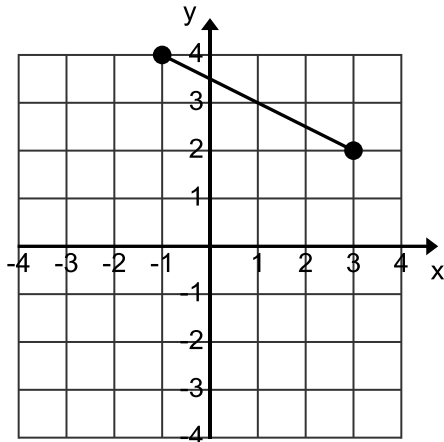
Round Answers to the nearest tenth.

Name \_\_\_\_\_

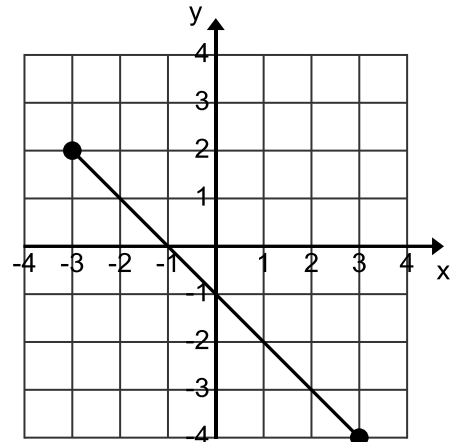
- \_\_\_\_\_ 1. If the  $\cos \theta = \frac{1}{2}$ , what is  $\theta$ ?
- \_\_\_\_\_ 2. Simplify  $5\sqrt{3} \cdot 2\sqrt{2}$  NO CALCULATOR!
- \_\_\_\_\_ 3. Simplify  $\sqrt{6615}$
- \_\_\_\_\_ 4. Solve for x:  $44 = \sqrt{4x}$
- \_\_\_\_\_ 5. Simplify all the way:  $5\sqrt{3} \cdot 2\sqrt{8}$  NO CALCULATOR!
- \_\_\_\_\_ 6. When placing a ladder against a building, you are supposed to have the ladder form a  $75^\circ$  angle with the ground. If I have a 24 foot ladder, how far away from the building must I put the ladder to form such an angle?
- \_\_\_\_\_ 7. Consider a right triangle that has lengths of 9, 40, and 41.  
What is the closest angle measurement between the legs that are 9 and 41?
- \_\_\_\_\_ 8. When taking off, a typical airplane gets to about 160 *mph* before lifting off the ground. The plane gets to this speed and then takes off at a  $10^\circ$  angle with the ground. I see the plane directly above my house a few minutes later and it is exactly 2 miles above the ground. To the **nearest foot**, how far is my house from the exact spot the plane took off? There are 5,280 feet in a mile.
- \_\_\_\_\_ 9. Simplify all the way:  $\frac{12}{\sqrt{6}}$
- \_\_\_\_\_ 10. Solve for  $\theta$ . Round your answer to the nearest **whole number**.

$$39 = 30 + 3 \tan \theta$$

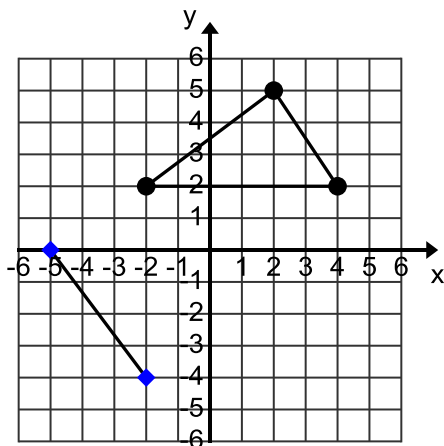
Graph 1



Graph 2



- \_\_\_\_\_ 1. As a radical (e.g.  $2\sqrt{15}$ ), what is the length of the line in graph 1?
- \_\_\_\_\_ 2. As a radical (e.g.  $2\sqrt{15}$ ), what is the length of the line in graph 2?
- \_\_\_\_\_ 3. Give a counterexample to the statement: For every integer  $n$ ,  $n^3$  is positive.  
(In other words, give me a value for  $n$  that shows this statement is not true.)
- \_\_\_\_\_ 4. Given  $\triangle ABC$  with  $AB = 13$  and  $AC = 18$ , which could be possible lengths of  $BC$ ?
- 44      38      6      4      22      31      34      13      5



- \_\_\_\_\_ 5. What point would make the two triangles congruent?
- A. (1, -1)      B. (-2, 2)      C. (-5, 4)      D. (-2, 1)