

## 8-5 Finding missing angles

Name \_\_\_\_\_

Given the coordinate point, determine the angle formed with the x-axis in the **first** quadrant. Assume that the angle opens **counterclockwise** (in other words, all angles are to be positive).

1. (2, 6)  $\theta \approx$  \_\_\_\_\_

2. (1, 7)  $\theta \approx$  \_\_\_\_\_

3. (5, -2)  $\theta \approx$  \_\_\_\_\_

4. (-2, 5)  $\theta \approx$  \_\_\_\_\_

5. (3, -5)  $\theta \approx$  \_\_\_\_\_

6. (1, 1)  $\theta \approx$  \_\_\_\_\_

7. (-2, -5)  $\theta \approx$  \_\_\_\_\_

\_\_\_\_\_ 8. A plane is flying due East and is located at the point (3, 5).  
It now must turn North and head to the point (5, 12).  
How many degrees must it turn?

\_\_\_\_\_ 9. A plane is flying due South and is located at the point (-2, -6).  
It now must turn a little East and head to the point (-1, -12).  
How many degrees must it turn?

\_\_\_\_\_ 10. A plane is flying due East and is located at the point (2, 10).  
It now turns  $22.6199^\circ$  left towards the North. It travels 13 miles.  
Where is it now located?