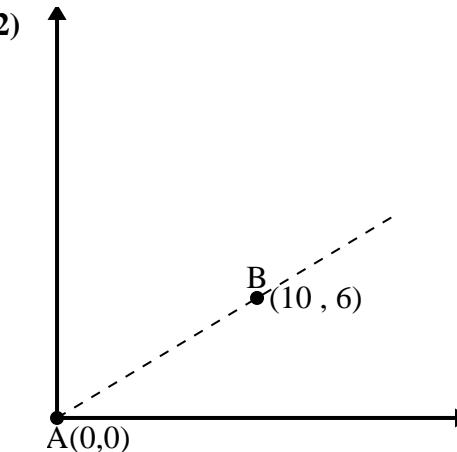
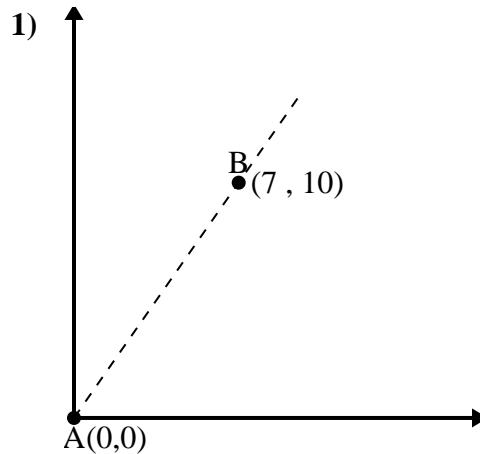




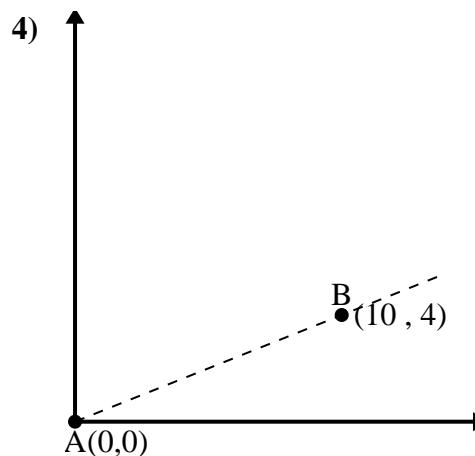
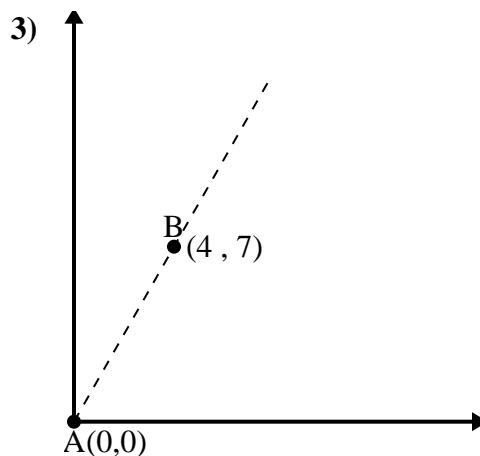
Applying the Law of Cosines

Name: _____

Use the law of Cosines to find the point B's angle relative to point A.

Answers

1. _____
2. _____
3. _____
4. _____

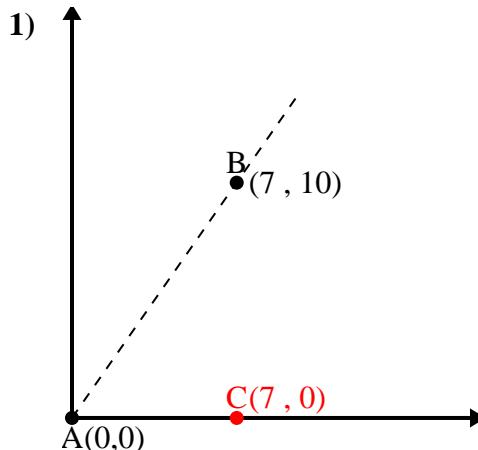




Applying the Law of Cosines

Name: **Answer Key**

Use the law of Cosines to find the point B's angle relative to point A.



$$\overline{AB} \text{ length} = 12.21$$

$$\overline{AC} \text{ length} = 7$$

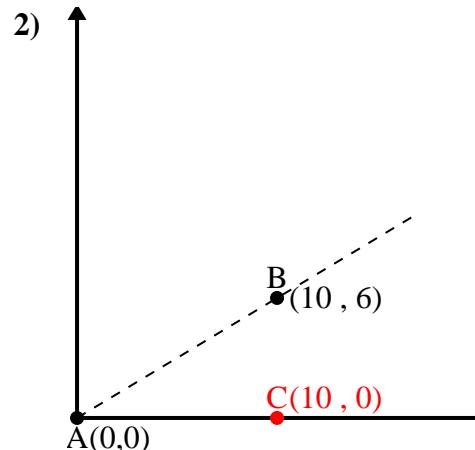
$$\overline{BC} \text{ length} = 10$$

$$(149 + 49 + 100) \div (2 \times 12.21 \times 7)$$

$$0.57$$

$$\cos^{-1}(0.57)$$

$$55.01^\circ$$



$$\overline{AB} \text{ length} = 11.66$$

$$\overline{AC} \text{ length} = 10$$

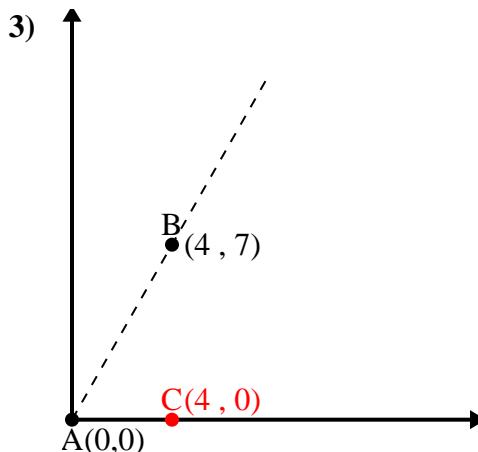
$$\overline{BC} \text{ length} = 6$$

$$(136 + 100 + 36) \div (2 \times 11.66 \times 10)$$

$$0.86$$

$$\cos^{-1}(0.86)$$

$$30.96^\circ$$



$$\overline{AB} \text{ length} = 8.06$$

$$\overline{AC} \text{ length} = 4$$

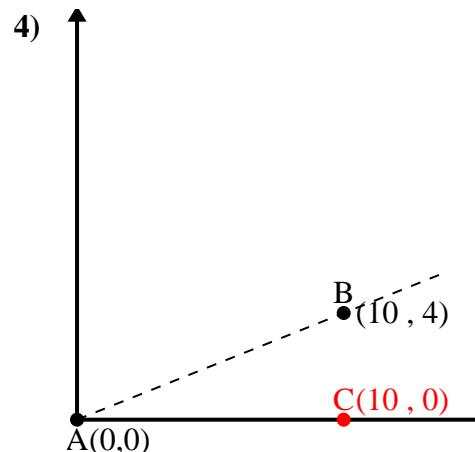
$$\overline{BC} \text{ length} = 7$$

$$(65 + 16 + 49) \div (2 \times 8.06 \times 4)$$

$$0.5$$

$$\cos^{-1}(0.5)$$

$$60.26^\circ$$



$$\overline{AB} \text{ length} = 10.77$$

$$\overline{AC} \text{ length} = 10$$

$$\overline{BC} \text{ length} = 4$$

$$(116 + 100 + 16) \div (2 \times 10.77 \times 10)$$

$$0.93$$

$$\cos^{-1}(0.93)$$

$$21.8^\circ$$

Answers

1. **55.01°**

2. **30.96°**

3. **60.26°**

4. **21.8°**