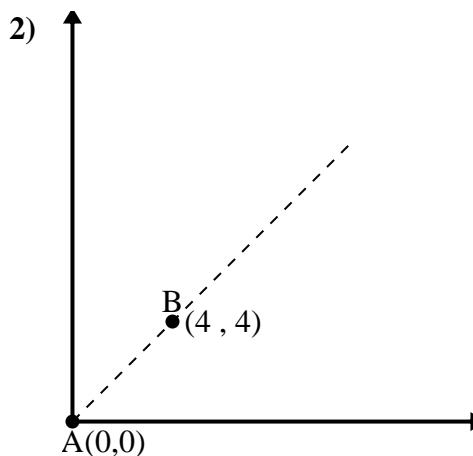
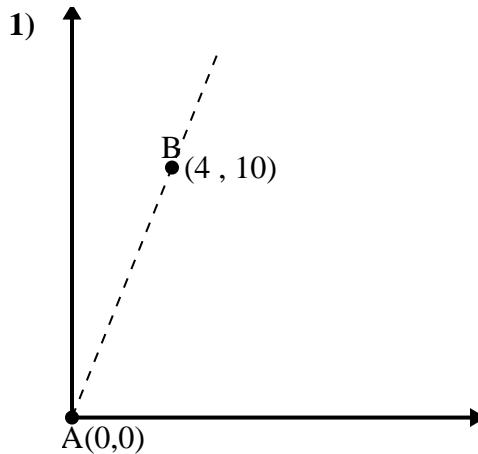


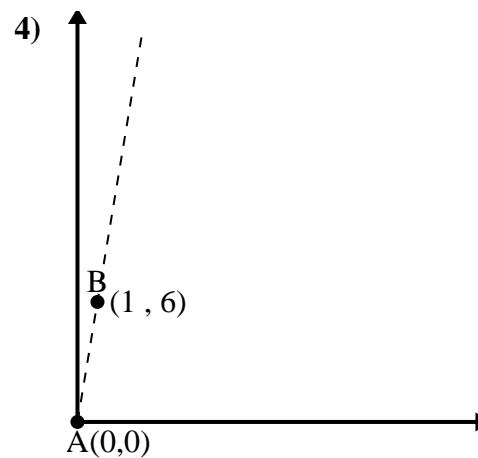
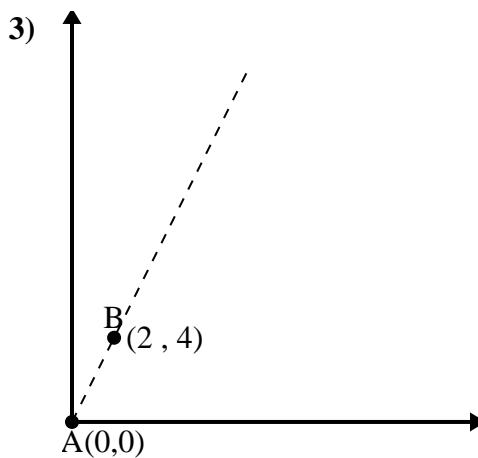
Applying the Law of Cosines

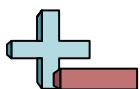
Name: _____

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

Answers

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

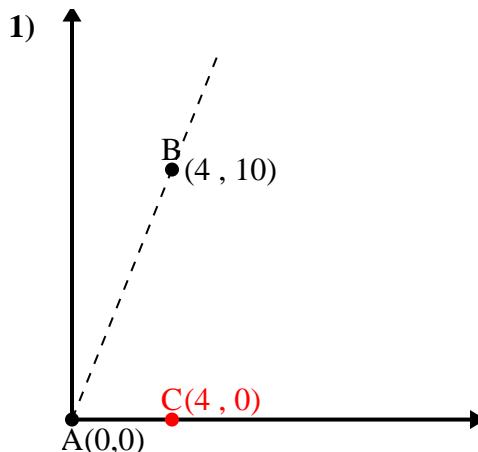




Applying the Law of Cosines

Name: **Answer Key**

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



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

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

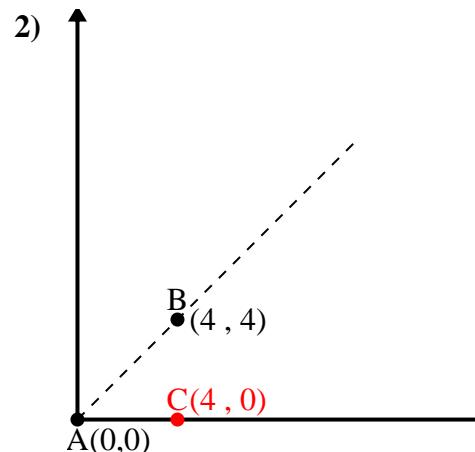
$$\overline{BC} \text{ length} = 10$$

$$(116 + 16 + 100) \div (2 \times 10.77 \times 4)$$

$$0.37$$

$$\cos^{-1}(0.37)$$

$$68.2^\circ$$



$$\overline{AB} \text{ length} = 5.66$$

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

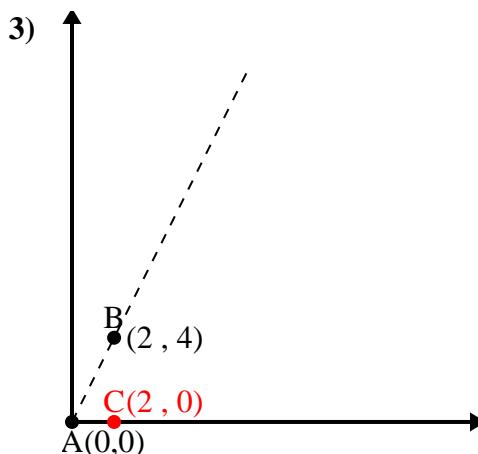
$$\overline{BC} \text{ length} = 4$$

$$(32 + 16 + 16) \div (2 \times 5.66 \times 4)$$

$$0.71$$

$$\cos^{-1}(0.71)$$

$$45^\circ$$



$$\overline{AB} \text{ length} = 4.47$$

$$\overline{AC} \text{ length} = 2$$

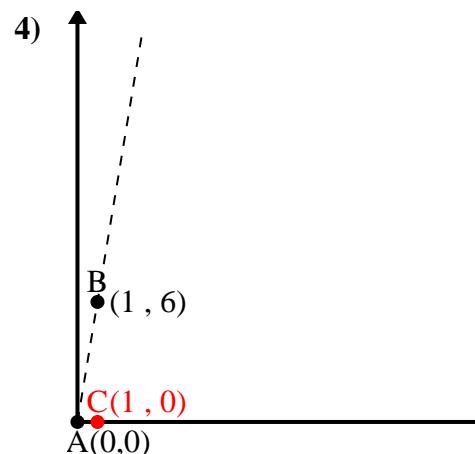
$$\overline{BC} \text{ length} = 4$$

$$(20 + 4 + 16) \div (2 \times 4.47 \times 2)$$

$$0.45$$

$$\cos^{-1}(0.45)$$

$$63.43^\circ$$



$$\overline{AB} \text{ length} = 6.08$$

$$\overline{AC} \text{ length} = 1$$

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

$$(37 + 1 + 36) \div (2 \times 6.08 \times 1)$$

$$0.16$$

$$\cos^{-1}(0.16)$$

$$80.54^\circ$$

Answers

1. **68.2°**

2. **45°**

3. **63.43°**

4. **80.54°**