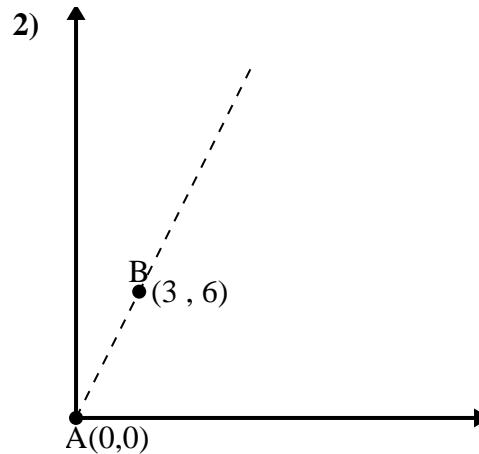
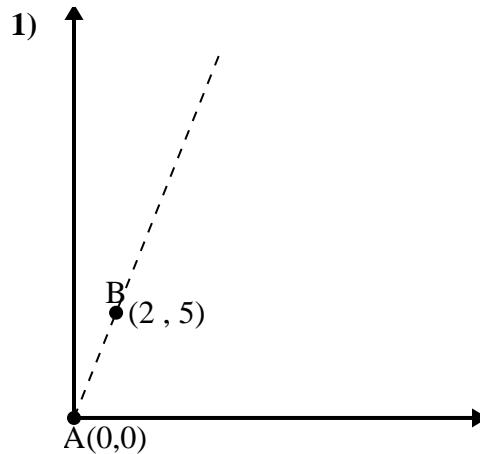




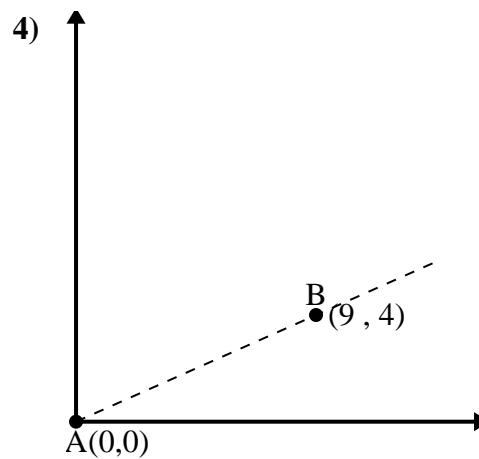
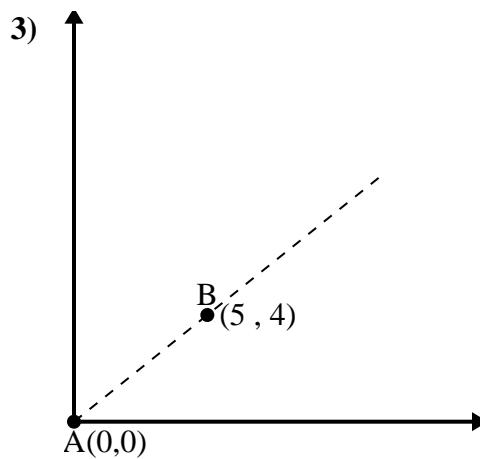
## Applying the Law of Cosines

Name: \_\_\_\_\_

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

Answers

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

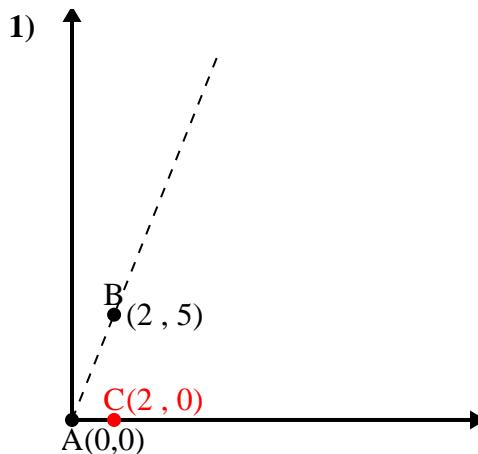




## Applying the Law of Cosines

Name: **Answer Key**

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

**Answers**

$$\overline{AB} \text{ length} = 5.39$$

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

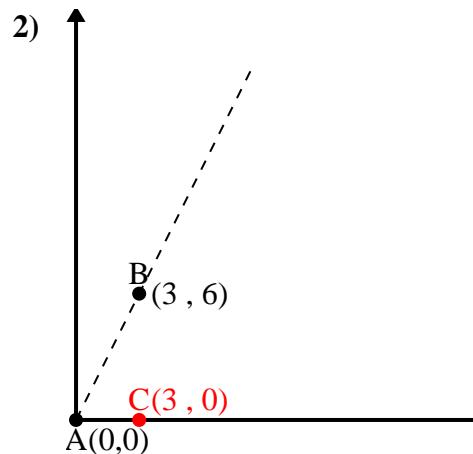
$$\overline{BC} \text{ length} = 5$$

$$(29 + 4 + 25) \div (2 \times 5.39 \times 2)$$

$$0.37$$

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

$$68.2^\circ$$



$$\overline{AB} \text{ length} = 6.71$$

$$\overline{AC} \text{ length} = 3$$

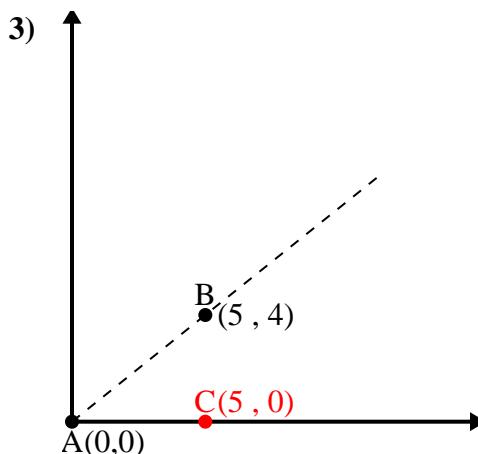
$$\overline{BC} \text{ length} = 6$$

$$(45 + 9 + 36) \div (2 \times 6.71 \times 3)$$

$$0.45$$

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

$$63.43^\circ$$



$$\overline{AB} \text{ length} = 6.4$$

$$\overline{AC} \text{ length} = 5$$

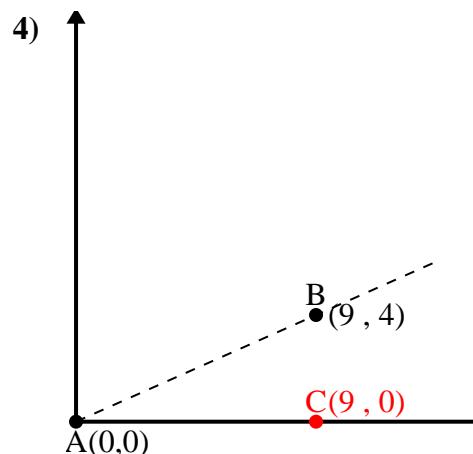
$$\overline{BC} \text{ length} = 4$$

$$(41 + 25 + 16) \div (2 \times 6.4 \times 5)$$

$$0.78$$

$$\cos^{-1}(0.78)$$

$$38.66^\circ$$



$$\overline{AB} \text{ length} = 9.85$$

$$\overline{AC} \text{ length} = 9$$

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

$$(97 + 81 + 16) \div (2 \times 9.85 \times 9)$$

$$0.91$$

$$\cos^{-1}(0.91)$$

$$23.96^\circ$$

1. **68.2°**

2. **63.43°**

3. **38.66°**

4. **23.96°**