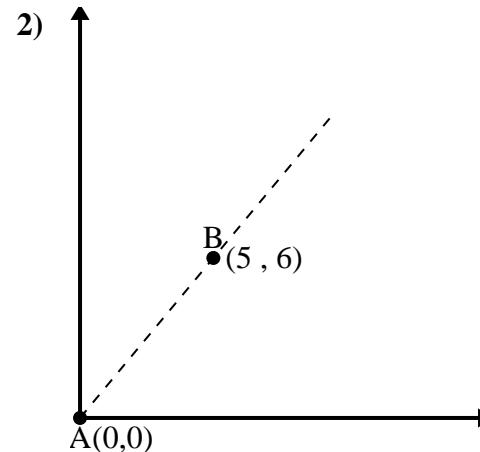
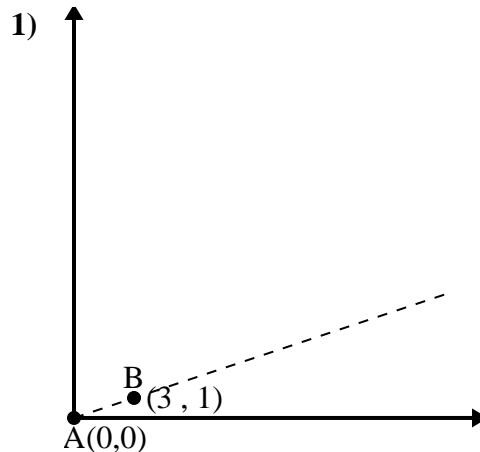




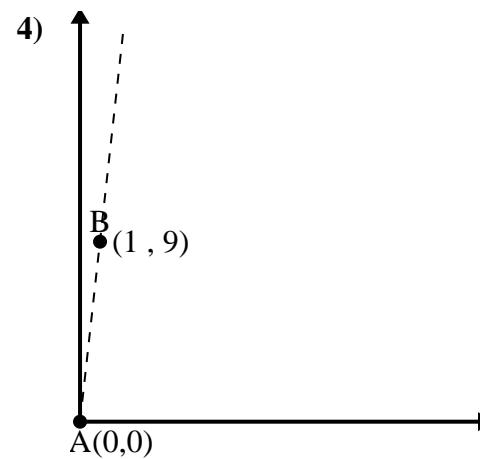
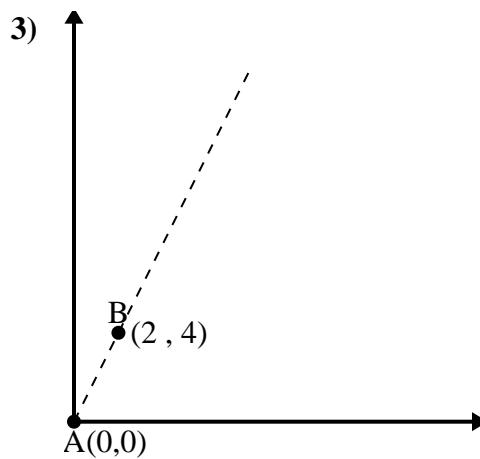
Applying the Law of Cosines

Name: _____

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

Answers

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

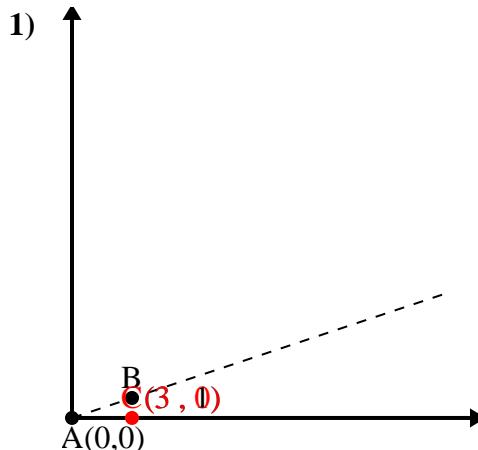




Applying the Law of Cosines

Name: **Answer Key**

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

Answers

$$\overline{AB} \text{ length} = 3.16$$

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

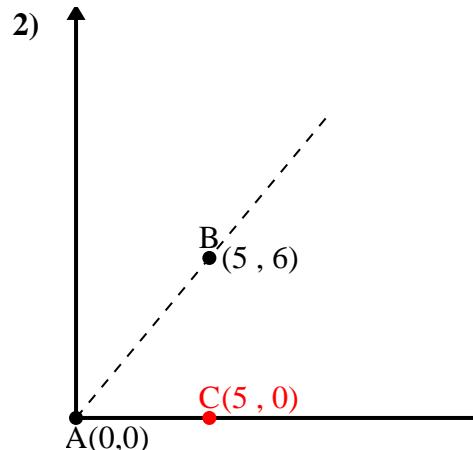
$$\overline{BC} \text{ length} = 1$$

$$(10 + 9 + 1) \div (2 \times 3.16 \times 3)$$

$$0.95$$

$$\cos^{-1}(0.95)$$

$$18.43^\circ$$



$$\overline{AB} \text{ length} = 7.81$$

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

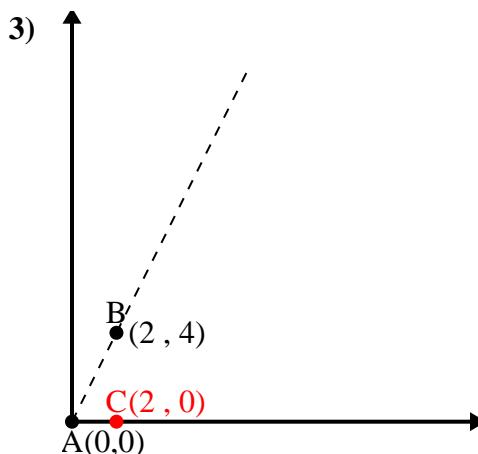
$$\overline{BC} \text{ length} = 6$$

$$(61 + 25 + 36) \div (2 \times 7.81 \times 5)$$

$$0.64$$

$$\cos^{-1}(0.64)$$

$$50.19^\circ$$



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

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

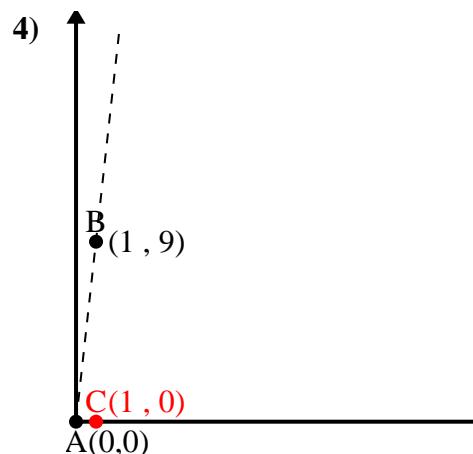
$$\overline{BC} \text{ length} = 4$$

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

$$0.45$$

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

$$63.43^\circ$$



$$\overline{AB} \text{ length} = 9.06$$

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

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

$$(82 + 1 + 81) \div (2 \times 9.06 \times 1)$$

$$0.11$$

$$\cos^{-1}(0.11)$$

$$83.66^\circ$$

- | | |
|----|---------------|
| 1. | 18.43° |
| 2. | 50.19° |
| 3. | 63.43° |
| 4. | 83.66° |