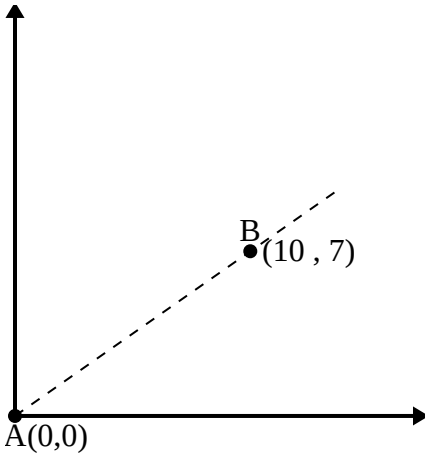
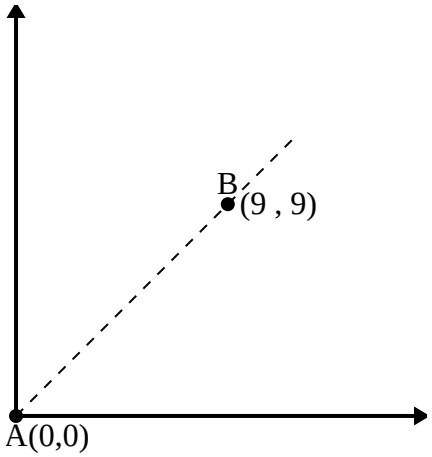
Applying the Law of Cosines Name:

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

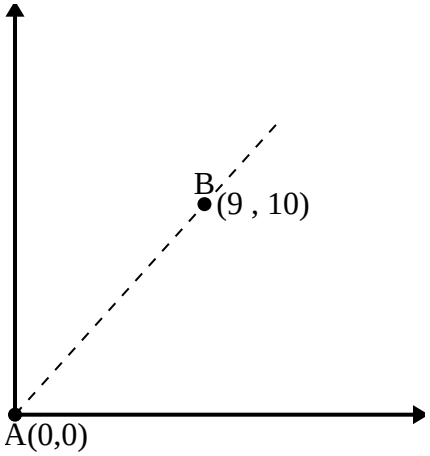
1)



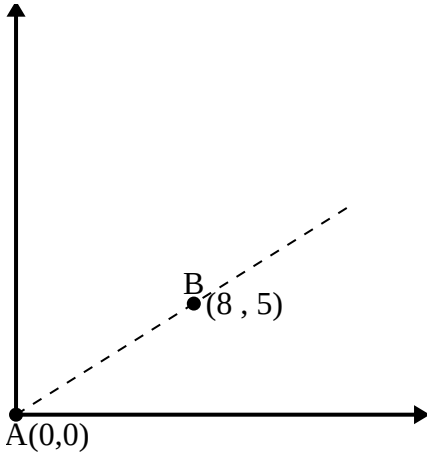
2)



3)



4)

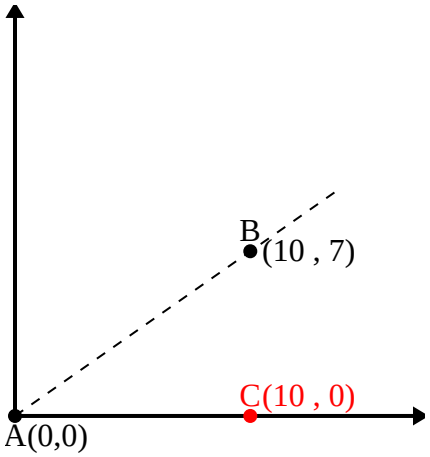


Answers

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

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

1)



$\overline{AB}$ length = 12.21

$\overline{AC}$ length = 10

$\overline{BC}$ length = 7

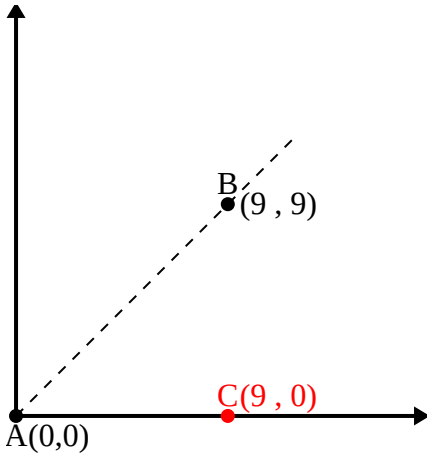
(149 + 100 + 49) ÷ (2 × 12.21 × 10)

0.82

$\cos^{-1}(0.82)$

34.99°

2)



$\overline{AB}$ length = 12.73

$\overline{AC}$ length = 9

$\overline{BC}$ length = 9

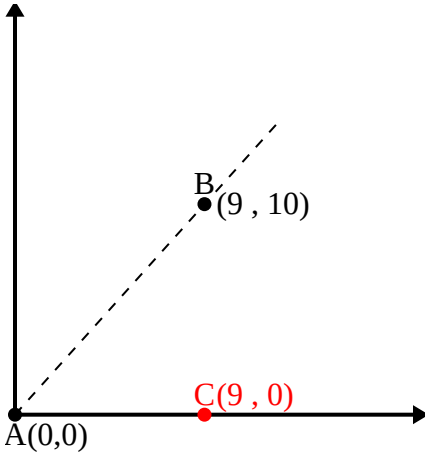
(162 + 81 + 81) ÷ (2 × 12.73 × 9)

0.71

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

45°

3)



$\overline{AB}$ length = 13.45

$\overline{AC}$ length = 9

$\overline{BC}$ length = 10

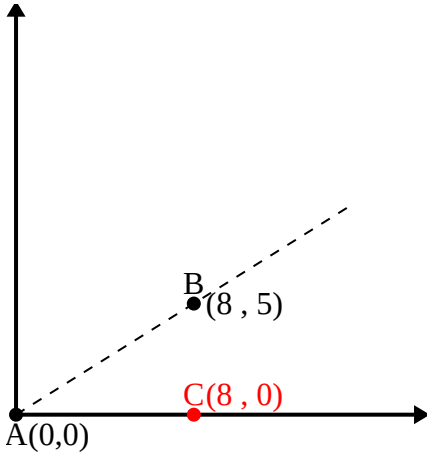
(181 + 81 + 100) ÷ (2 × 13.45 × 9)

0.67

$\cos^{-1}(0.67)$

48.01°

4)



$\overline{AB}$ length = 9.43

$\overline{AC}$ length = 8

$\overline{BC}$ length = 5

(89 + 64 + 25) ÷ (2 × 9.43 × 8)

0.85

$\cos^{-1}(0.85)$

32.01°

Answers

1. **34.99°**
2. **45°**
3. **48.01°**
4. **32.01°**