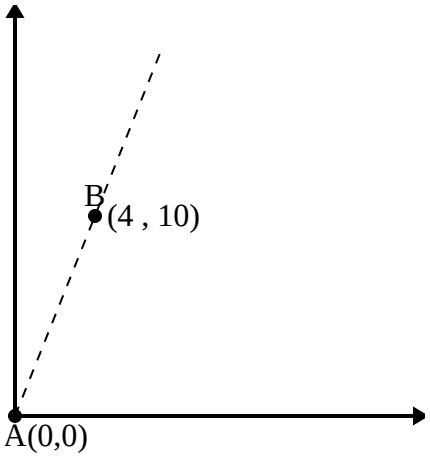
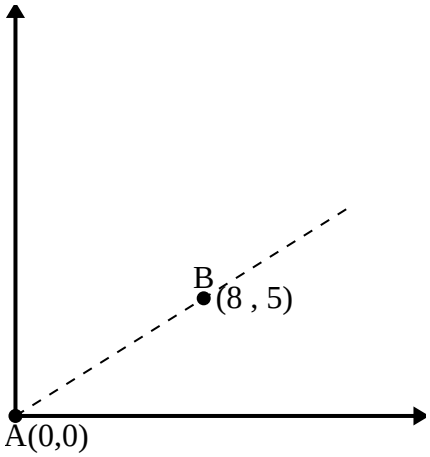
Applying the Law of Cosines Name:

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

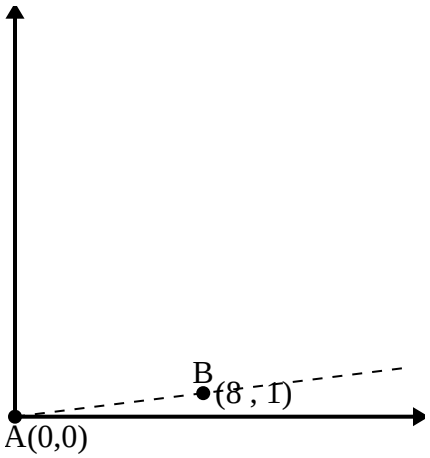
1)



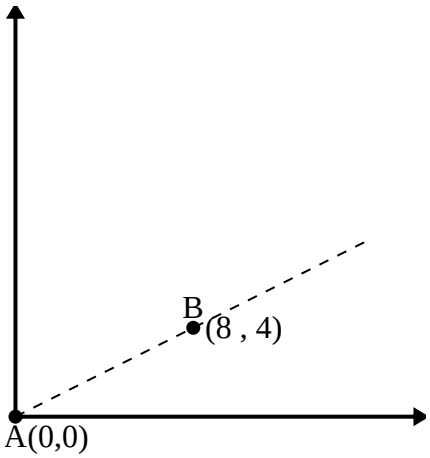
2)



3)



4)

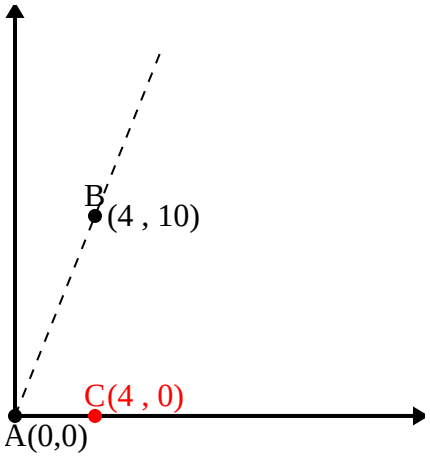


Answers

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

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

1)



$\overline{AB}$ length = 10.77

$\overline{AC}$ length = 4

$\overline{BC}$ length = 10

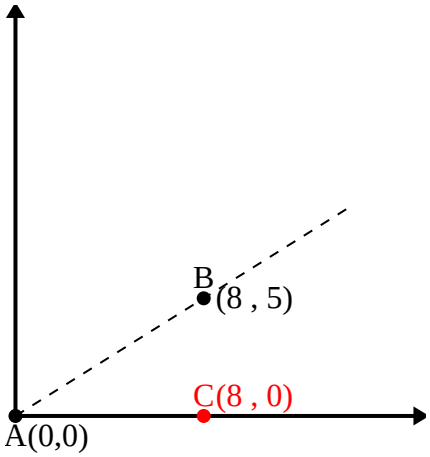
$(116 + 16 + 100) \div (2 \times 10.77 \times 4)$

0.37

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

68.2°

2)



$\overline{AB}$ length = 9.43

$\overline{AC}$ length = 8

$\overline{BC}$ length = 5

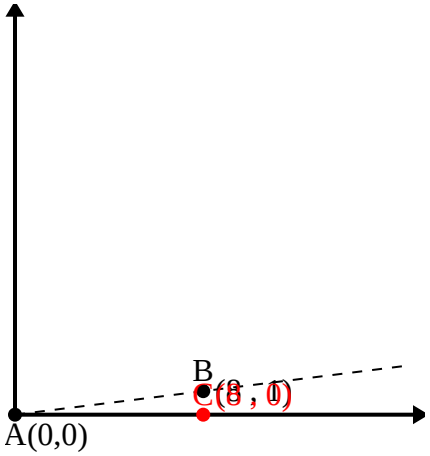
$(89 + 64 + 25) \div (2 \times 9.43 \times 8)$

0.85

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

32.01°

3)



$\overline{AB}$ length = 8.06

$\overline{AC}$ length = 8

$\overline{BC}$ length = 1

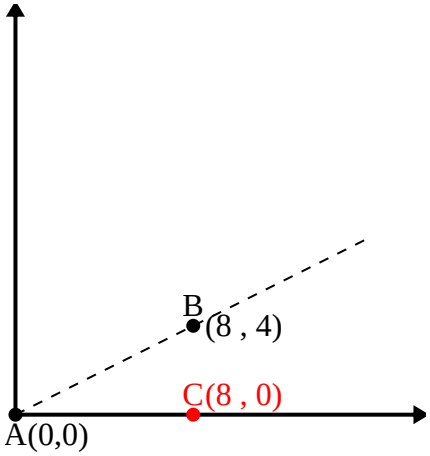
$(65 + 64 + 1) \div (2 \times 8.06 \times 8)$

0.99

$\cos^{-1}(0.99)$

7.13°

4)



$\overline{AB}$ length = 8.94

$\overline{AC}$ length = 8

$\overline{BC}$ length = 4

$(80 + 64 + 16) \div (2 \times 8.94 \times 8)$

0.89

$\cos^{-1}(0.89)$

26.57°

Answers

1. **68.2°**
2. **32.01°**
3. **7.13°**
4. **26.57°**