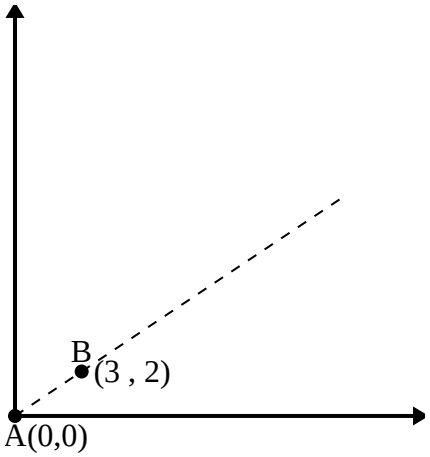
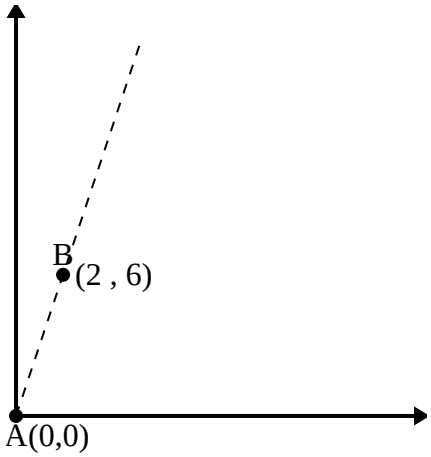
Applying the Law of Cosines Name:

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

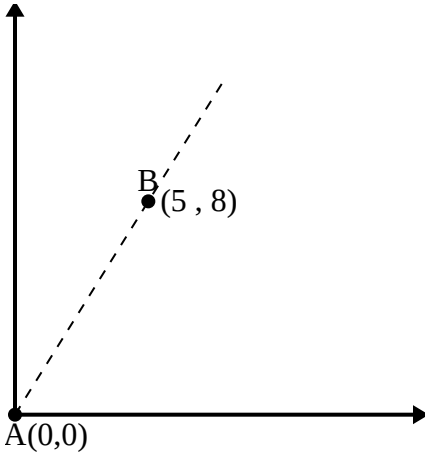
1)



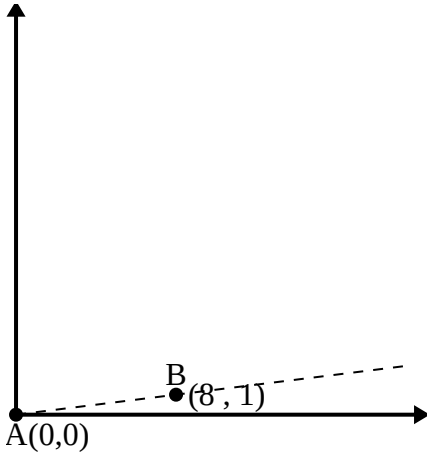
2)



3)



4)

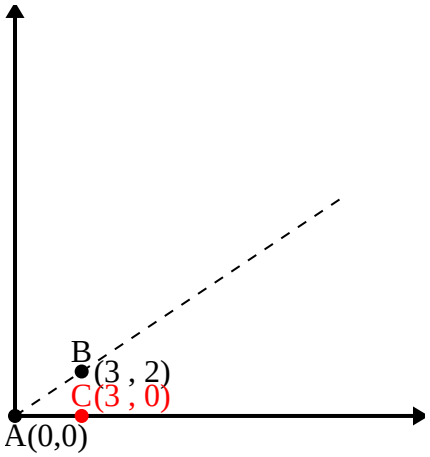


Answers

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

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

1)



$\overline{AB}$ length = 3.61

$\overline{AC}$ length = 3

$\overline{BC}$ length = 2

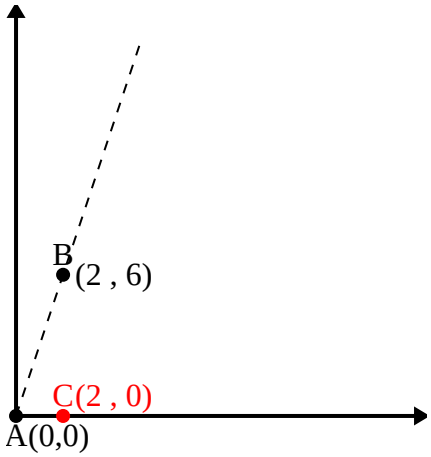
$(13 + 9 + 4) \div (2 \times 3.61 \times 3)$

0.83

$\cos^{-1}(0.83)$

33.69°

2)



$\overline{AB}$ length = 6.32

$\overline{AC}$ length = 2

$\overline{BC}$ length = 6

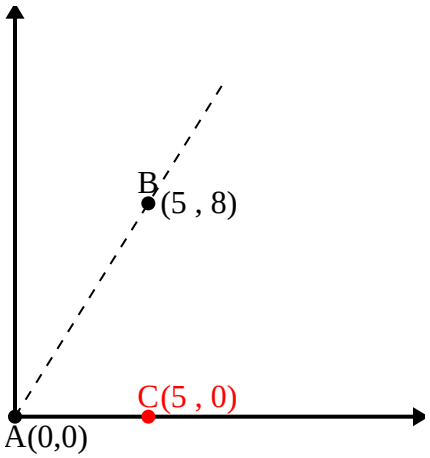
$(40 + 4 + 36) \div (2 \times 6.32 \times 2)$

0.32

$\cos^{-1}(0.32)$

71.57°

3)



$\overline{AB}$ length = 9.43

$\overline{AC}$ length = 5

$\overline{BC}$ length = 8

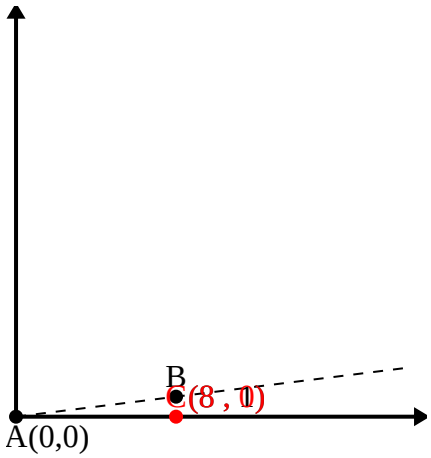
$(89 + 25 + 64) \div (2 \times 9.43 \times 5)$

0.53

$\cos^{-1}(0.53)$

57.99°

4)



$\overline{AB}$ 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°

Answers

1. **33.69°**
2. **71.57°**
3. **57.99°**
4. **7.13°**