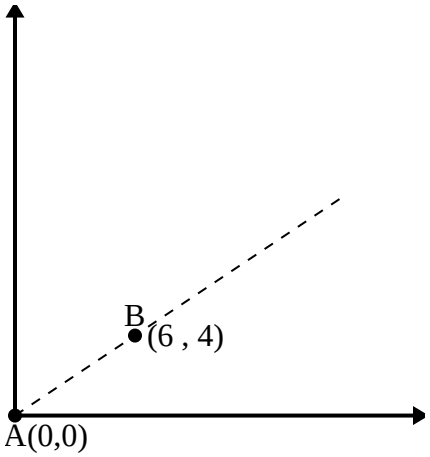
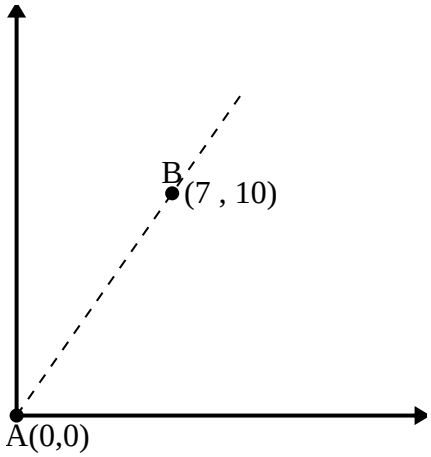
Applying the Law of Cosines Name:

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

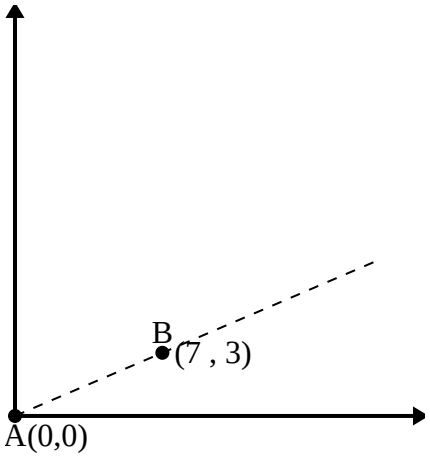
1)



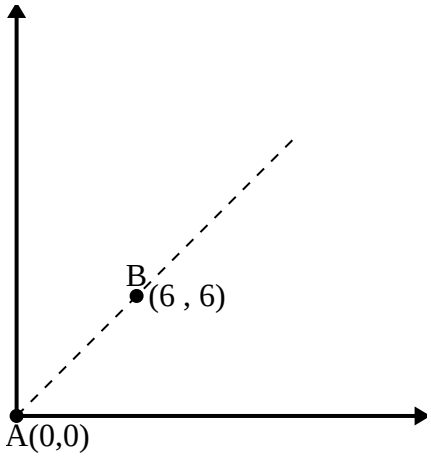
2)



3)



4)

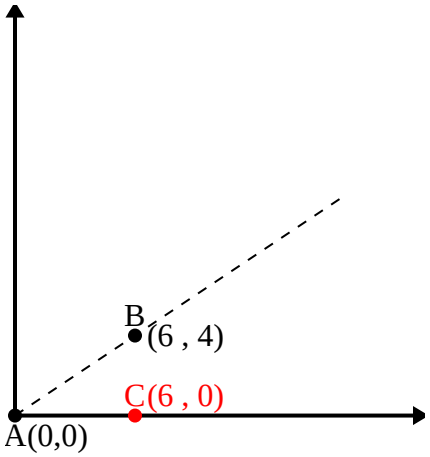


Answers

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

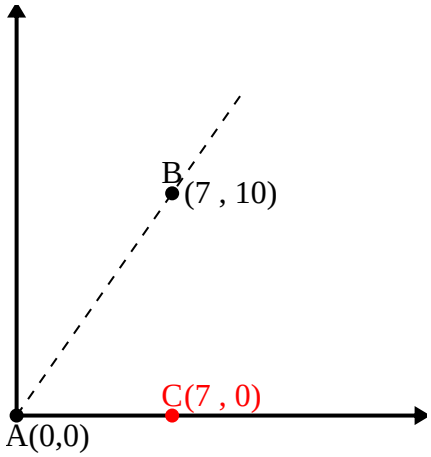
Use the law of Cosines to find the point B's angle relative to point A.

1)



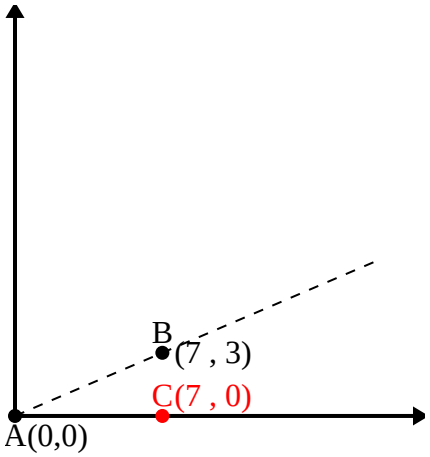
$\overline{AB}$ length = 7.21
$\overline{AC}$ length = 6
$\overline{BC}$ length = 4
$(52 + 36 + 16) \div (2 \times 7.21 \times 6)$
0.83
$\cos^{-1}(0.83)$
33.69°

2)



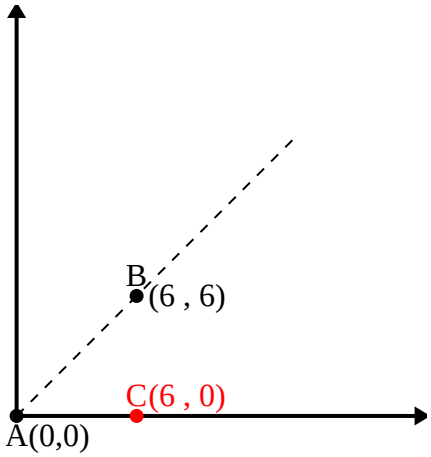
$\overline{AB}$ length = 12.21
$\overline{AC}$ length = 7
$\overline{BC}$ length = 10
$(149 + 49 + 100) \div (2 \times 12.21 \times 7)$
0.57
$\cos^{-1}(0.57)$
55.01°

3)



$\overline{AB}$ length = 7.62
$\overline{AC}$ length = 7
$\overline{BC}$ length = 3
$(58 + 49 + 9) \div (2 \times 7.62 \times 7)$
0.92
$\cos^{-1}(0.92)$
23.2°

4)



$\overline{AB}$ length = 8.49
$\overline{AC}$ length = 6
$\overline{BC}$ length = 6
$(72 + 36 + 36) \div (2 \times 8.49 \times 6)$
0.71
$\cos^{-1}(0.71)$
45°

Answers

1. **33.69°**
2. **55.01°**
3. **23.2°**
4. **45°**