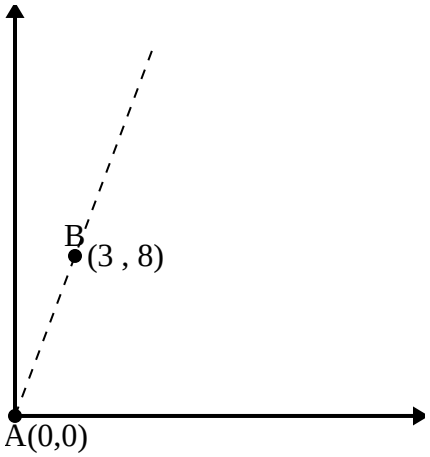
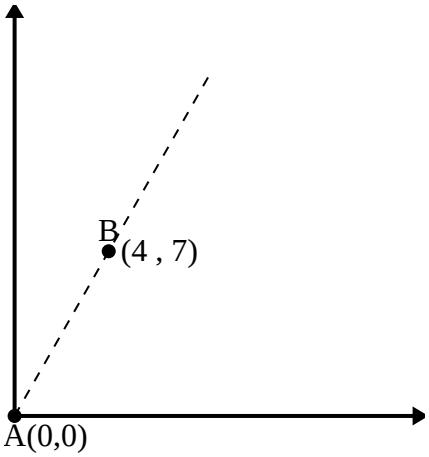
Applying the Law of Cosines Name:

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

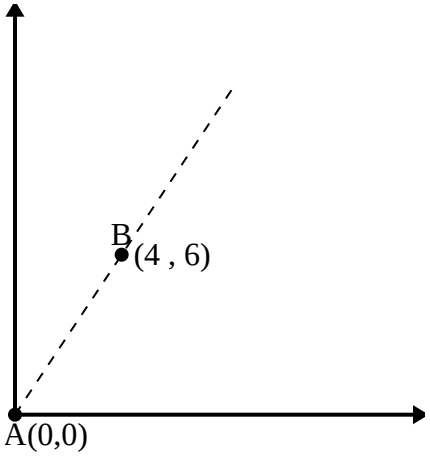
1)



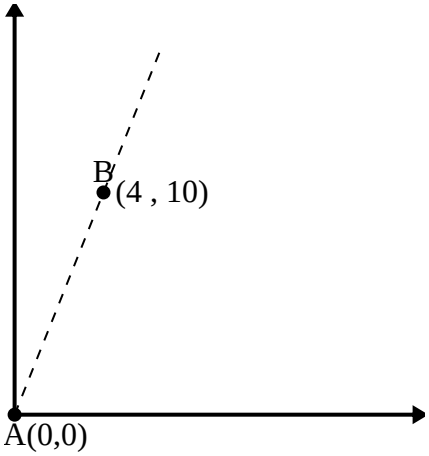
2)



3)



4)

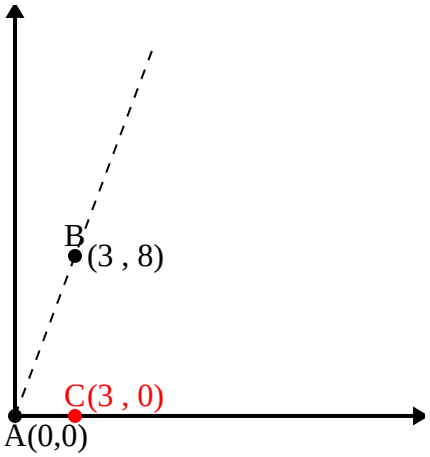


Answers

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

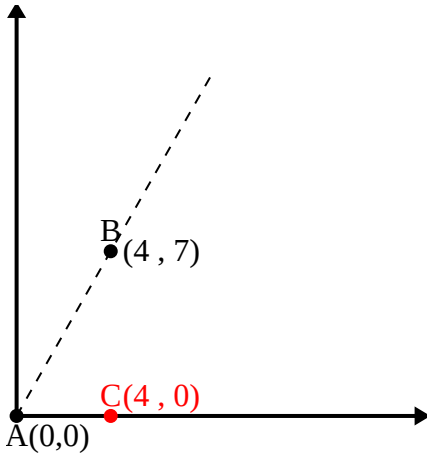
Use the law of Cosines to find the point B's angle relative to point A.

1)



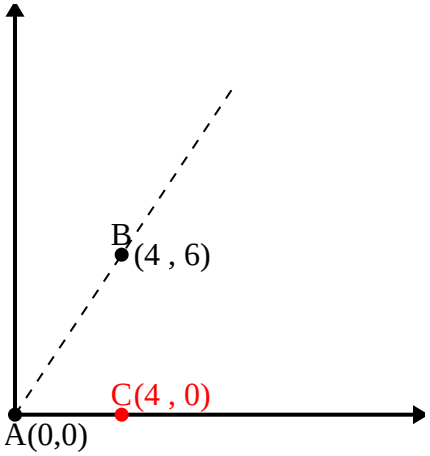
$\overline{AB}$ length = 8.54
$\overline{AC}$ length = 3
$\overline{BC}$ length = 8
(73 + 9 + 64) ÷ (2 × 8.54 × 3)
0.35
$\cos^{-1}(0.35)$
69.44°

2)



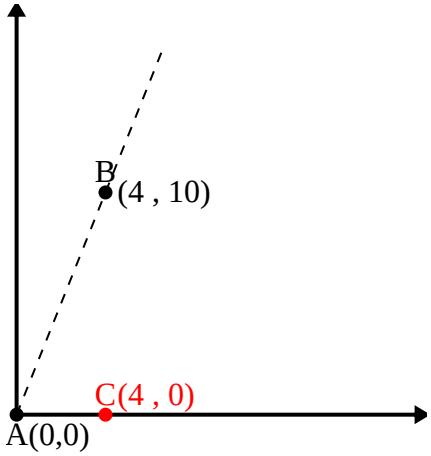
$\overline{AB}$ length = 8.06
$\overline{AC}$ length = 4
$\overline{BC}$ length = 7
(65 + 16 + 49) ÷ (2 × 8.06 × 4)
0.5
$\cos^{-1}(0.5)$
60.26°

3)



$\overline{AB}$ length = 7.21
$\overline{AC}$ length = 4
$\overline{BC}$ length = 6
(52 + 16 + 36) ÷ (2 × 7.21 × 4)
0.55
$\cos^{-1}(0.55)$
56.31°

4)



$\overline{AB}$ length = 10.77
$\overline{AC}$ length = 4
$\overline{BC}$ length = 10
(116 + 16 + 100) ÷ (2 × 10.77 × 4)
0.37
$\cos^{-1}(0.37)$
68.2°

Answers

1. **69.44°**
2. **60.26°**
3. **56.31°**
4. **68.2°**