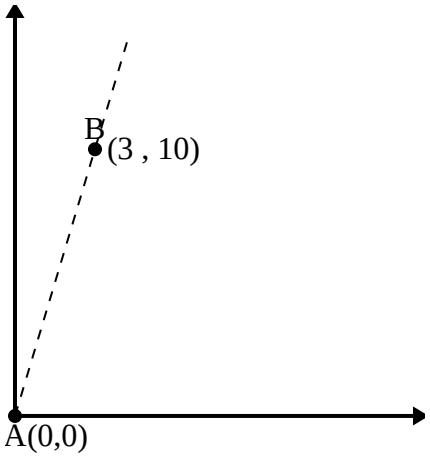
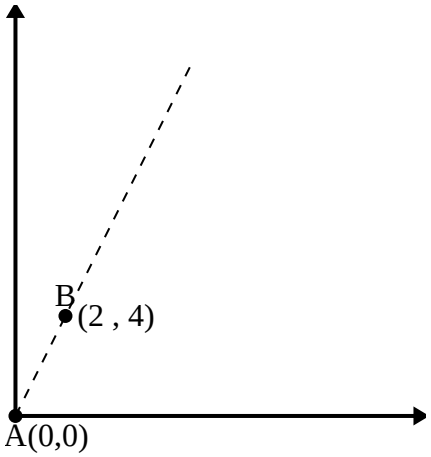
Applying the Law of Cosines Name:

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

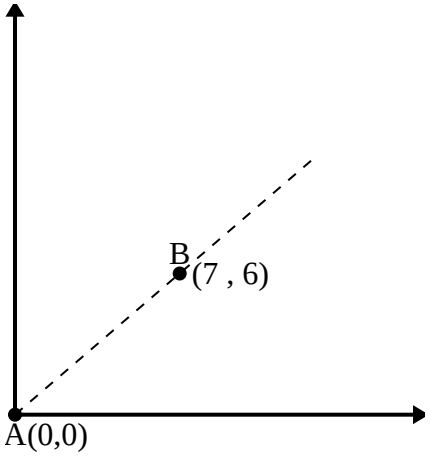
**1)**



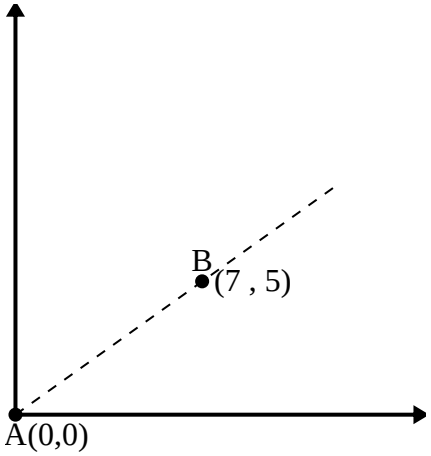

**2)**




**3)**




**4)**

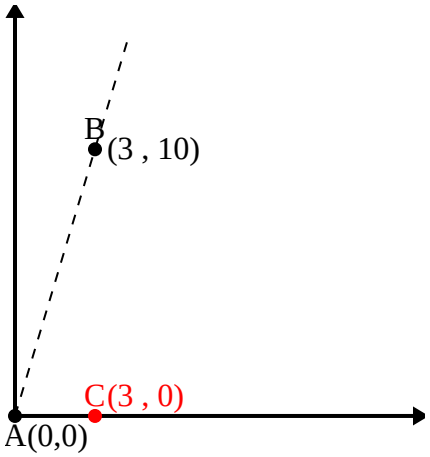



**Answers**

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

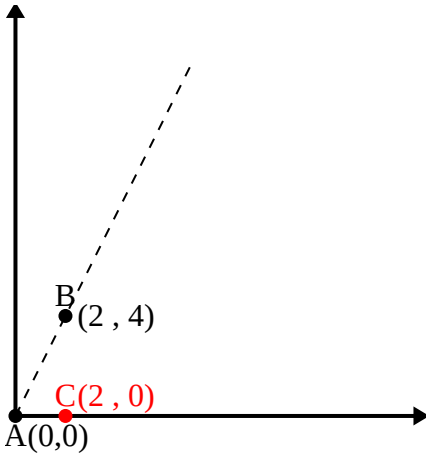
**Use the law of Cosines to find the point B's angle relative to point A.**

**1)**



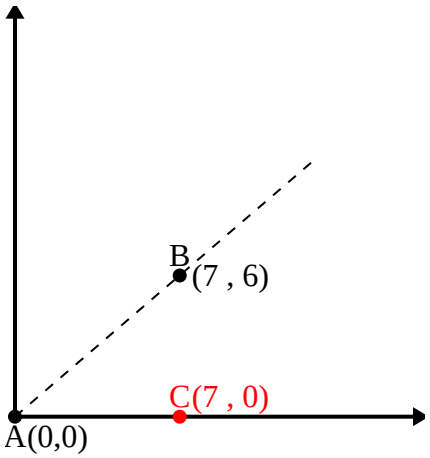

$\overline{AB}$ length = 10.44
$\overline{AC}$ length = 3
$\overline{BC}$ length = 10
(109 + 9 + 100) ÷ (2 × 10.44 × 3)
0.29
$\cos^{-1}(0.29)$
73.3°

**2)**



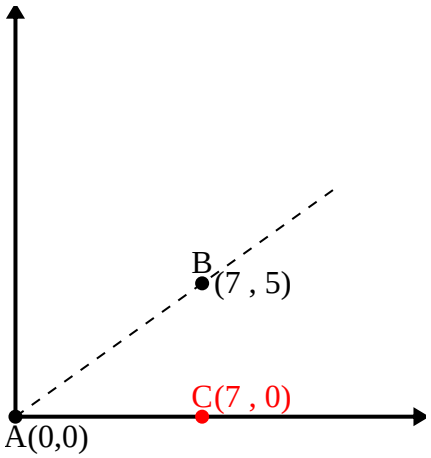

$\overline{AB}$ length = 4.47
$\overline{AC}$ length = 2
$\overline{BC}$ length = 4
(20 + 4 + 16) ÷ (2 × 4.47 × 2)
0.45
$\cos^{-1}(0.45)$
63.43°

**3)**




$\overline{AB}$ length = 9.22
$\overline{AC}$ length = 7
$\overline{BC}$ length = 6
(85 + 49 + 36) ÷ (2 × 9.22 × 7)
0.76
$\cos^{-1}(0.76)$
40.6°

**4)**




$\overline{AB}$ length = 8.6
$\overline{AC}$ length = 7
$\overline{BC}$ length = 5
(74 + 49 + 25) ÷ (2 × 8.6 × 7)
0.81
$\cos^{-1}(0.81)$
35.54°

**Answers**

1. **73.3°**
2. **63.43°**
3. **40.6°**
4. **35.54°**