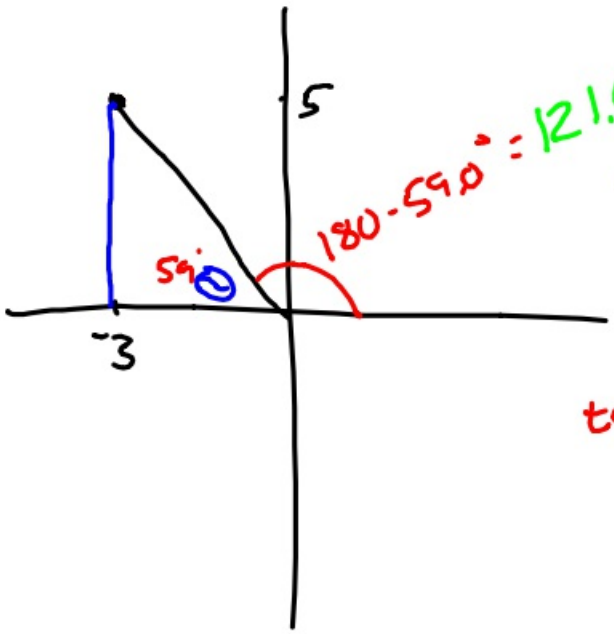
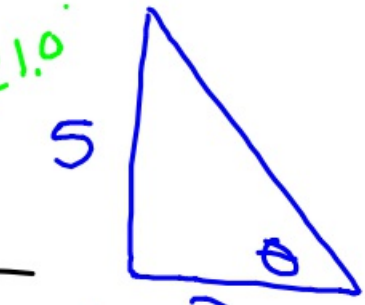
3-2-18 1st Trig

① (-3, 5)

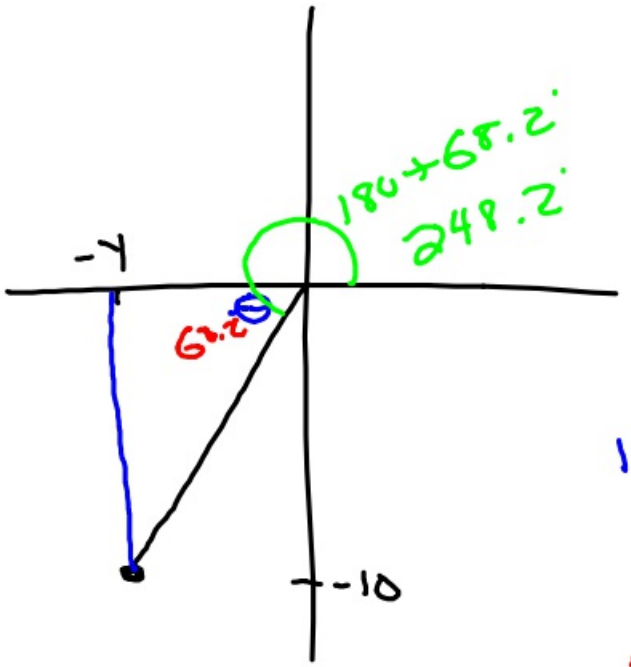


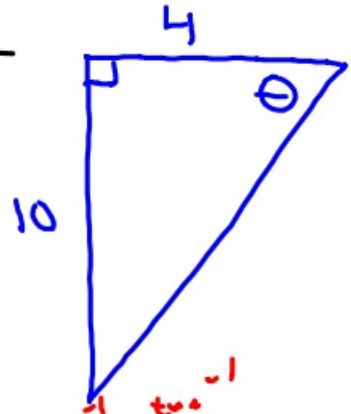


$\tan^{-1}$ $\tan\theta = \frac{5}{3}$

$\theta \approx 59.0°$

② (-4, -10)

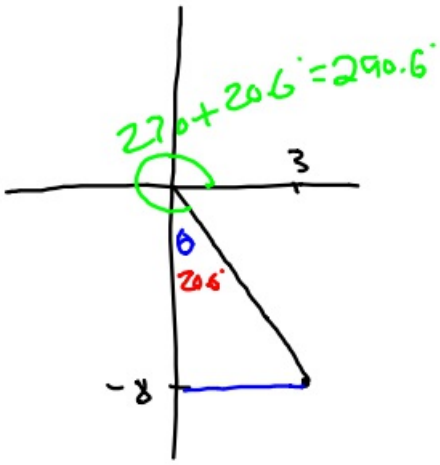


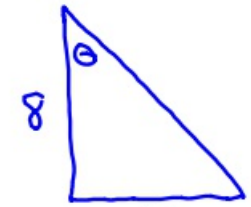


$\tan^{-1}$ $\tan\theta = \frac{10}{4}$

$\theta \approx 68.2°$

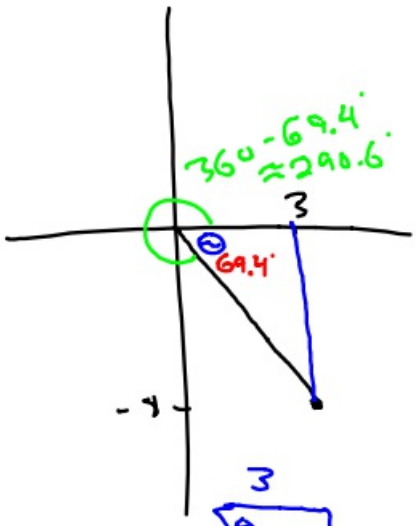
(3) (3, -8)

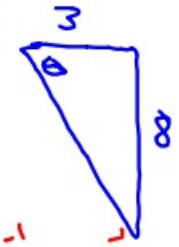




$\tan^{-1}$ $\tan\theta = \frac{3}{8}$

$\theta \approx 20.6°$

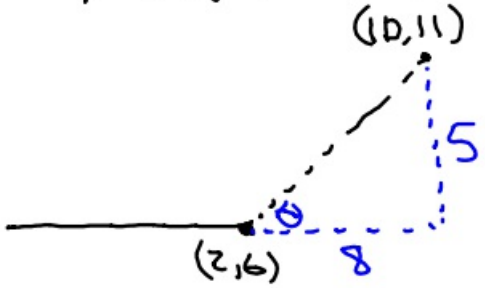




$\tan^{-1}$ $\tan\theta = \frac{8}{3}$

$\theta \approx 69.4°$

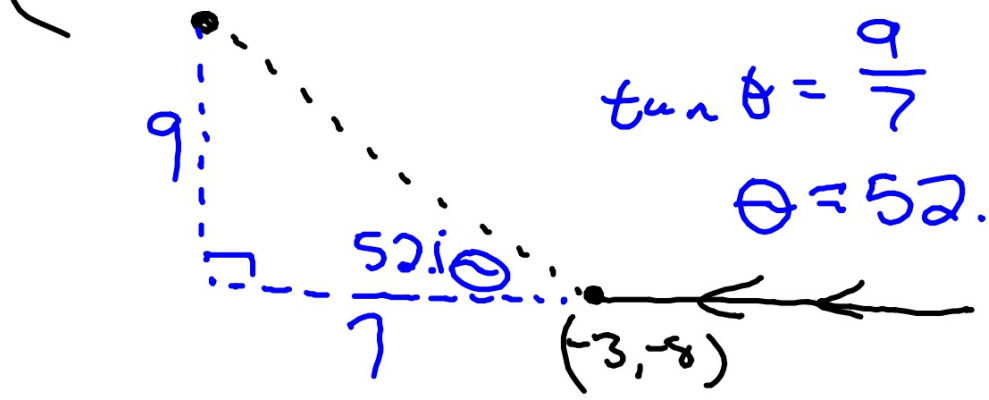
(4) A plane is flying due East and is at the point (2, 6). It must turn North to go to the point (10, 11). How many degrees must it turn?



$\tan\theta = \frac{5}{8}$

$\theta \approx 32.0°$

(5) Plane at $(-3,-8)$ flying due west must turn North to go to $(-10,1)$. How many degrees must it turn?

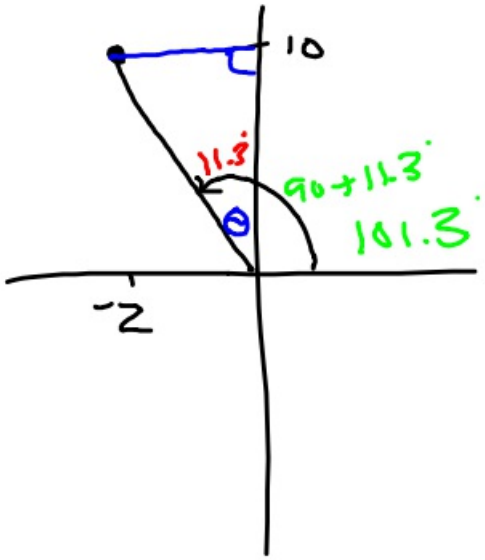


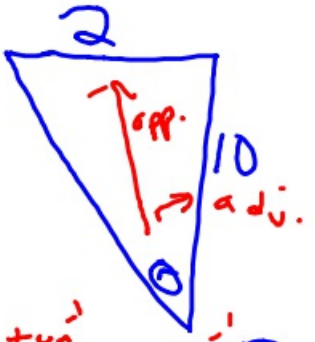
$\tan\theta = \frac{9}{7}$

$\theta = 52.1°$

3-2-18 3rd Trig

① (-2, 10)



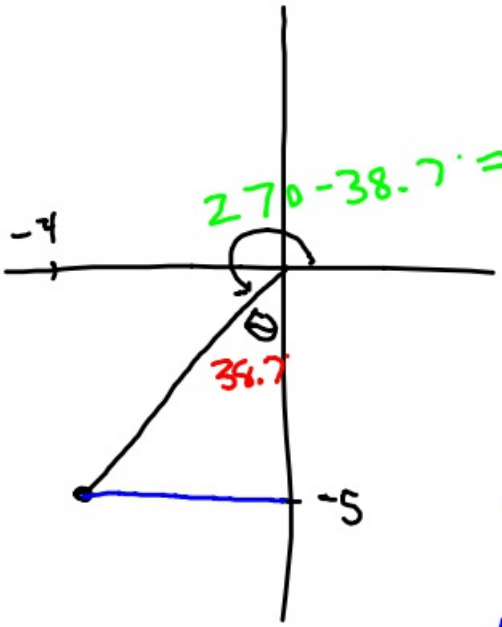


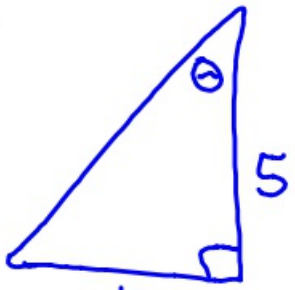
$\tan^{-1}$

$\tan\theta = \frac{2}{10}$

$\theta \approx 11.3°$

② (-4, -5)



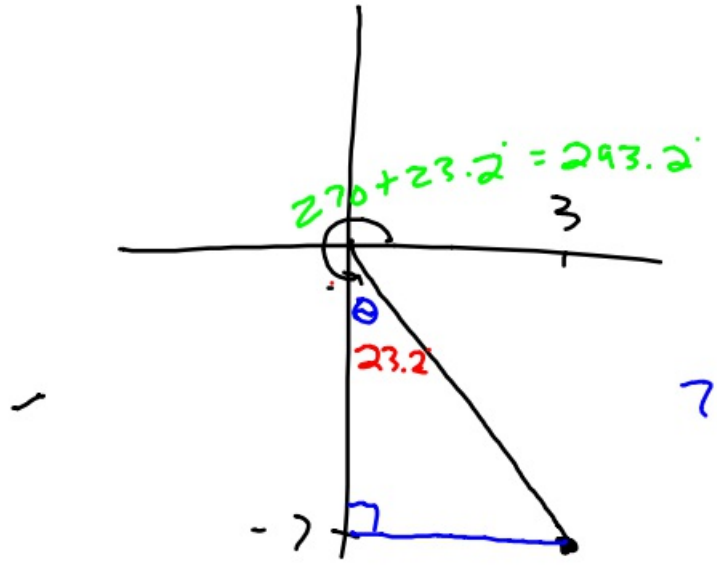


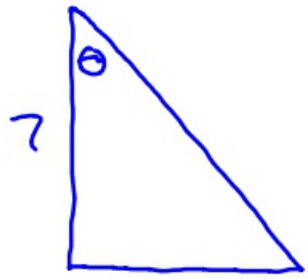
$\tan^{-1}$

$\tan\theta = \frac{4}{5}$

$\theta \approx 38.7°$

③ (3, -7)

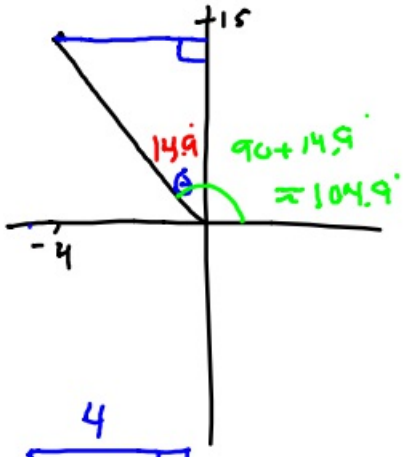


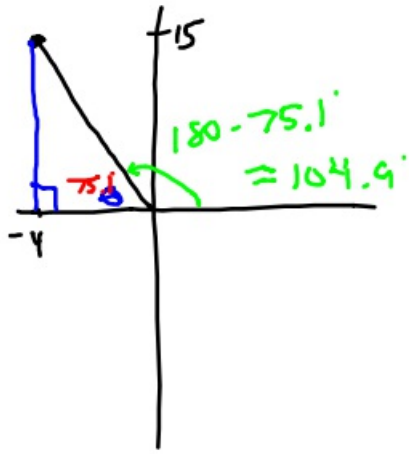


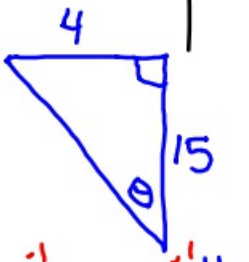
$\tan^{-1}$ $\tan\theta = \frac{3}{7}$

$\theta \approx 23.2°$

④ (-4, 15)

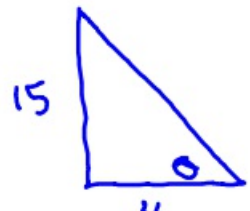






$\tan^{-1}$ $\tan\theta = \frac{4}{15}$

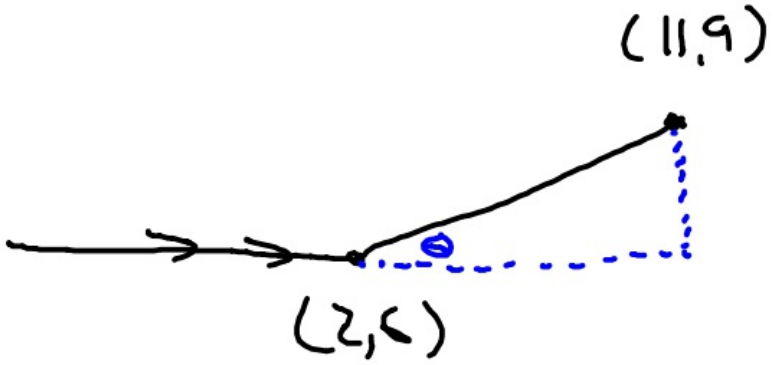
$\theta \approx 14.9°$

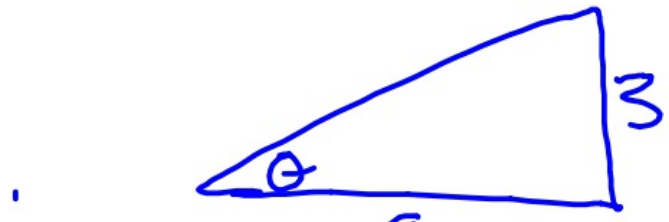


$\tan^{-1}$ $\tan\theta = \frac{15}{4}$

$\theta \approx 75.1°$

⑤ A plane flying due East at (2, 6) must turn North to go to (11, 9). How many degrees must the pilot turn?



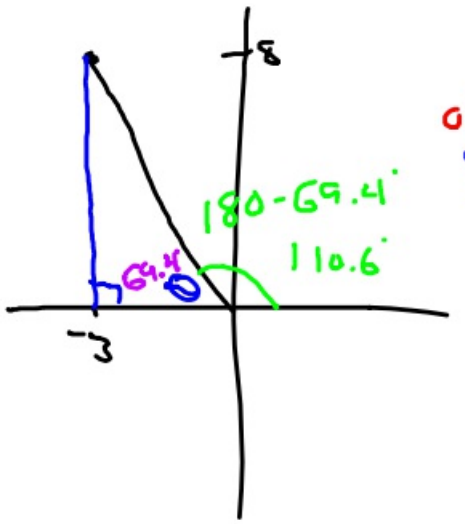


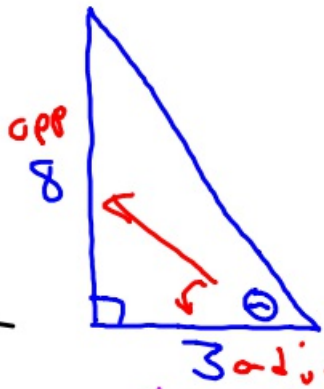
$\tan^{-1}$ $\tan^{-1}$ $\tan\theta = \frac{3}{9}$

$\theta \approx 18.4°$

3-2-18 4th Trig

① $(-3, 8)$



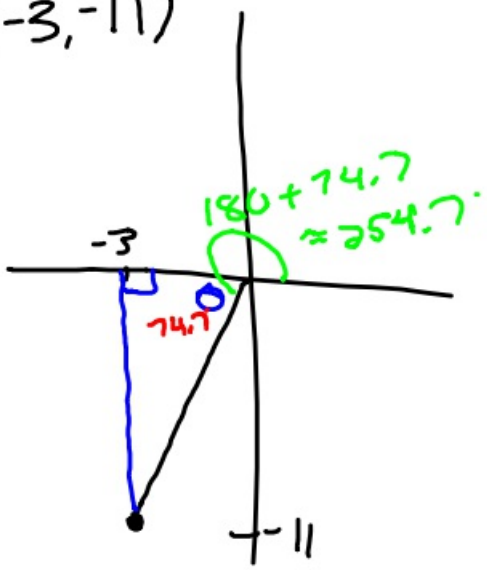


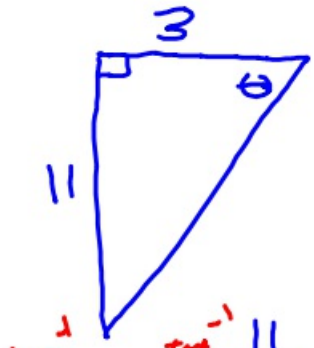
$\tan^{-1}$ $\tan^{-1}$

$\tan\theta = \frac{8}{3}$

$\theta \approx 69.4^\circ$

② $(-3, -11)$



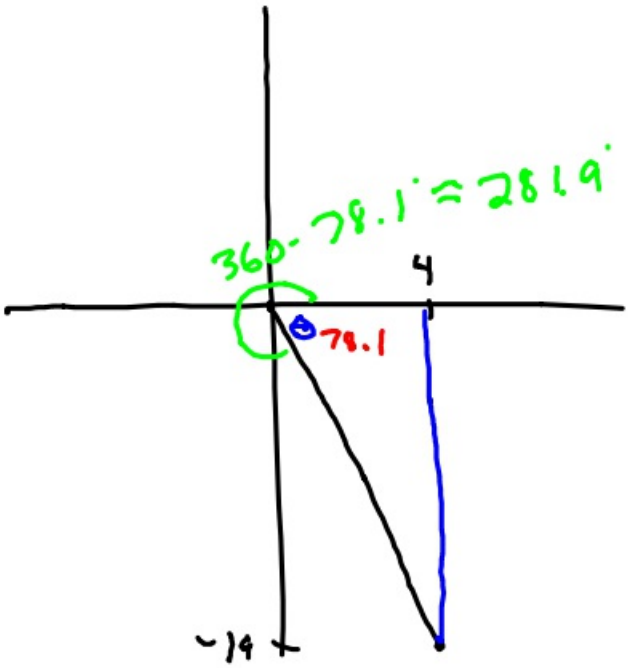


$\tan^{-1}$ $\tan^{-1}$

$\tan\theta = \frac{11}{3}$

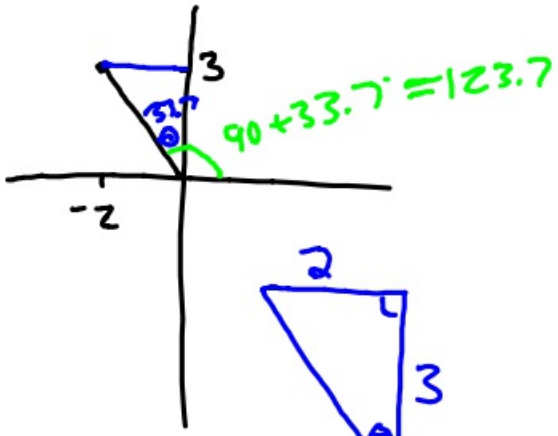
$\theta \approx 74.7^\circ$

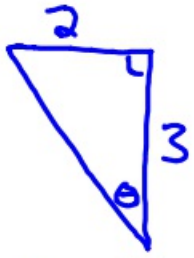
③ (4, -19)



θ ≈ 78.1°

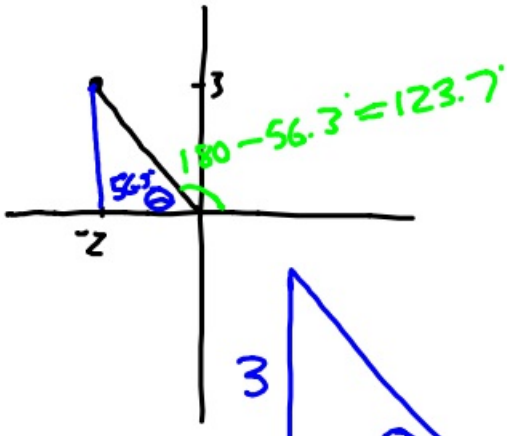
④ (-2, 3)

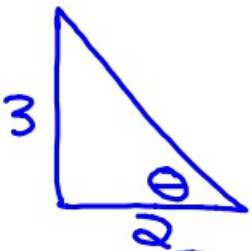




$\tan\theta = \frac{2}{3}$

θ ≈ 33.7°





$\tan\theta = \frac{3}{2}$

θ ≈ 56.3°

⑤ An airplane flying due East is at (4,7). It must turn Northward and go to (15,10). How many degrees must the pilot turn the plane?