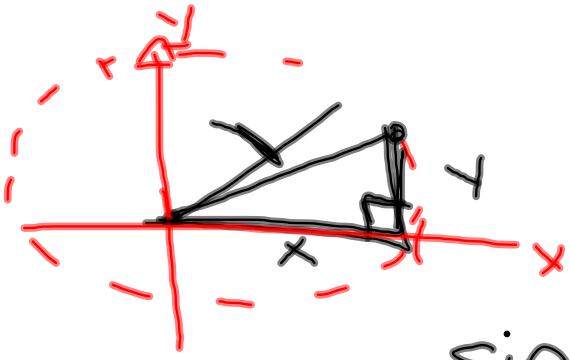
$\sin^{-1}(\sin\theta) = 0.2975$

$\sin^{-1}(0.2975)$

$\theta = 17.3°$

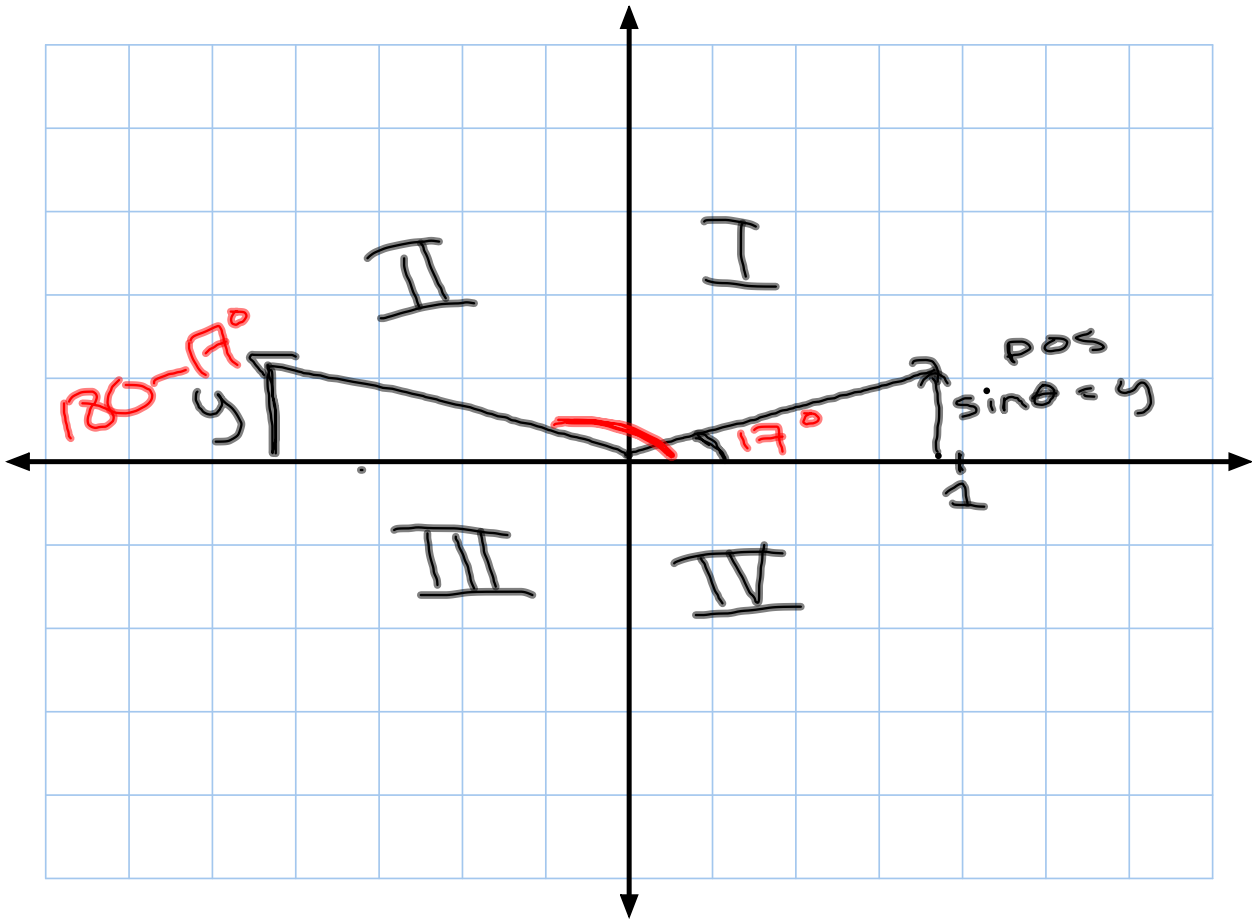


$\sin\theta = \frac{opp}{hyp}$

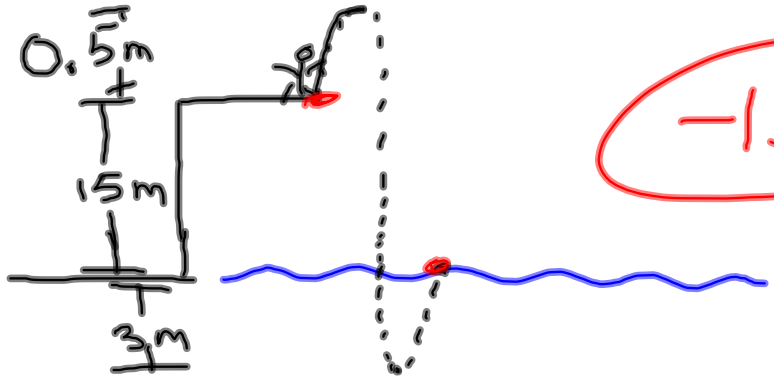
$\cos\theta = \frac{adj}{hyp}$

$\sin\theta = y$

$\cos\theta = x$


II
I
180-17°
y
17°
pos
sinθ = y
1
III
IV

1.



$-15m$

4a) $v_i = 3\ m/s$

$a = 2\ m/s^2$

$t = 3s$

$v_f = ?$

$v_f^2 = v_0^2 + 2a\Delta x$

$v_f = v_0 + at$

$\Delta x = v_0 t + \frac{1}{2}at^2$

$v_f = 3 + 2(3)$

$v_f = 3 + 6 = 9\ m/s$

b)

$v_0 = 0\ m/s$

$t = 3s$

$a = 4\ m/s^2$

$v_f = 0 + 4(3)$

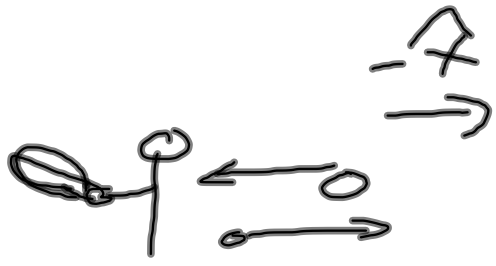
$v_f = 12\ m/s$

5. $V_0 = 40\ m/s$

$t = 5 \cdot 10^{-4}\ s$

$V_f = -45\ m/s$

$a = ?$



$V_f = V_0 + at$

$-45 = 40 + a \cdot 5 \cdot 10^{-4}$

$-40 \quad -40$

$\frac{-85}{0.0005} = \frac{0.0005 \cdot a}{0.0005}$

$a = 170000\ m/s^2$