

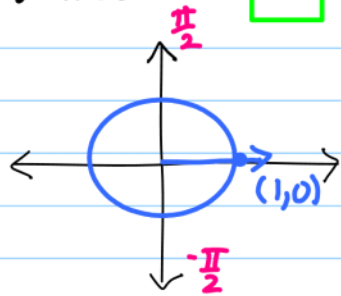
Thursday, January 10, 2019
6:47 PM

4.7C

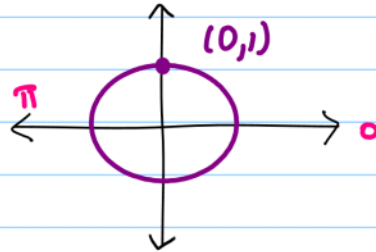
(VC), 2-16 (evens), 24, 50, 52, 56, 65

Evaluate without using a calculator.

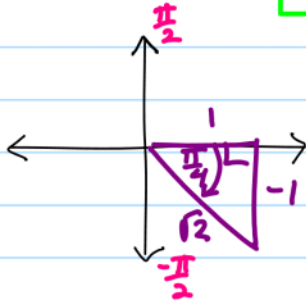
2) $\arcsin 0 = 0$



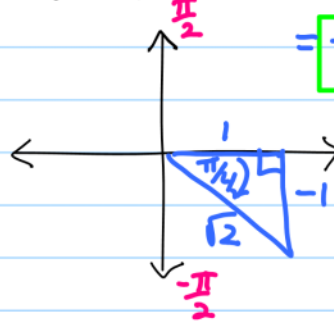
4) $\arccos 0 = \frac{\pi}{2}$



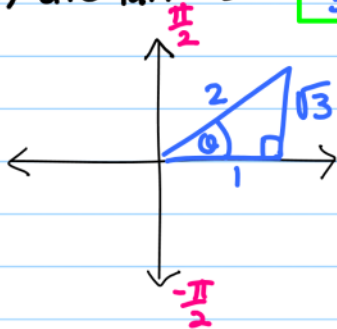
6) $\arctan(-1) = -\frac{\pi}{4}$



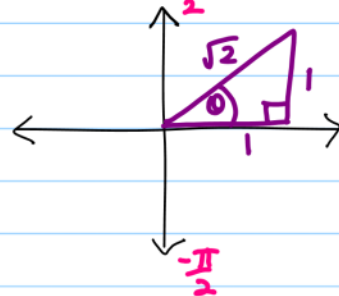
8) $\sin^{-1}(-\frac{\sqrt{2}}{2}) = \frac{\sqrt{2}}{2} \quad \frac{-2}{2\sqrt{2}} = -\frac{1}{\sqrt{2}}$
 $= -\frac{\pi}{4}$



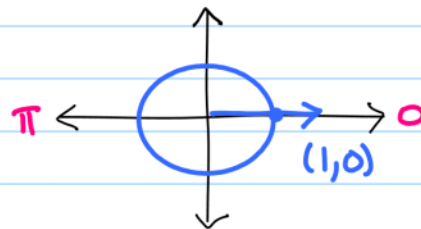
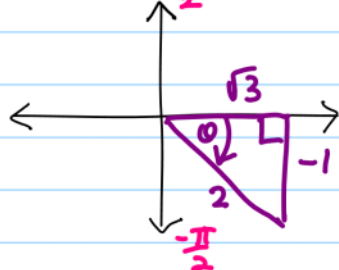
10) $\arctan \sqrt{3} = \frac{\pi}{3}$



12) $\arcsin \frac{\sqrt{2}}{2} = \frac{\sqrt{2}}{2} \quad \frac{2}{2\sqrt{2}} = \frac{1}{\sqrt{2}}$
 $= \frac{\pi}{4}$



14) $\tan^{-1}(-\frac{\sqrt{3}}{3}) = \frac{\sqrt{3}}{3} \quad \frac{-3}{3\sqrt{3}} = -\frac{1}{\sqrt{3}}$ 16) $\cos^{-1} 1 = 0$

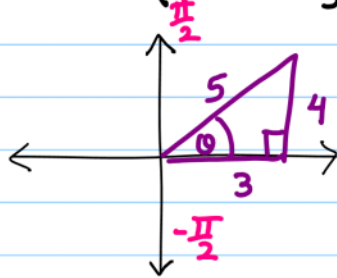


Evaluate using a calculator.

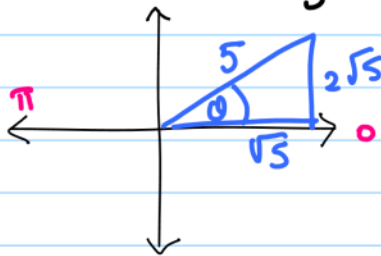
$$24) \arctan 1.5 = \boxed{1.50}$$

Find the exact value of the expression. HINT: Sketch a right triangle.

$$\frac{b}{a} \quad 50) \sec\left(\arcsin \frac{4}{5}\right) = \boxed{\frac{5}{3}}$$



$$52) \sin\left(\cos^{-1} \frac{\sqrt{5}}{5}\right) = \boxed{\frac{2\sqrt{5}}{5}}$$



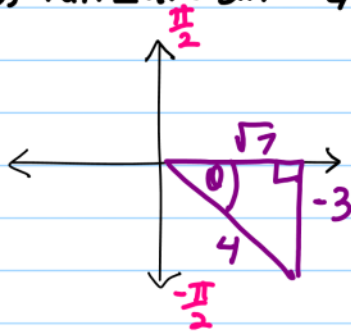
$$5^2 = (\sqrt{5})^2 + b^2$$

$$25 = 5 + b^2$$

$$20 = b^2$$

$$b = \sqrt{20} = 2\sqrt{5}$$

$$56) \tan\left[\arcsin\left(-\frac{3}{4}\right)\right] = -\frac{3}{\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}} = \boxed{-\frac{3\sqrt{7}}{7}}$$



$$4^2 = a^2 + (-3)^2$$

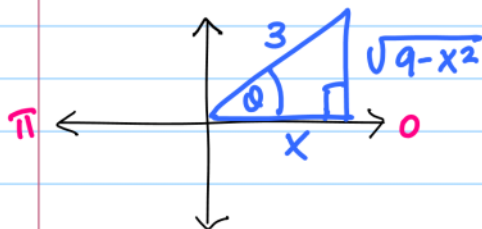
$$16 = a^2 + 9$$

$$7 = a^2$$

$$a = \sqrt{7}$$

Write an algebraic expression that is equivalent to the expression. HINT: Sketch a right triangle.

$$65) \tan\left(\arccos \frac{x}{3}\right) = \boxed{\frac{\sqrt{9-x^2}}{x}}$$



$$3^2 = x^2 + b^2$$

$$9 - x^2 = b^2$$

$$b = \sqrt{9 - x^2}$$