

Precalculus 5.1-5.7 Xtra Practice—No Calculator

1. Find the Domain and Range of each of the following functions

$$(a) f(x) = 2 - 3\sec\left(\frac{4\pi}{3}x - 3\right)$$

$$(b) g(x) = -7\cot\left(3\pi + \frac{2x}{5}\right) - 11$$

$$(c) h(x) = 4 + \frac{9}{7}\tan\left(\frac{2}{5} - \frac{3}{10}x\right)$$

$$(c) p(x) = -8\csc\left(4\pi x + \frac{22\pi}{3}\right) - \frac{7}{4}$$

2. Evaluate the following, if possible. If not possible, put “DNE.”

$$(a) \arctan\left(\tan\frac{15\pi}{11}\right) =$$

$$(b) \arcsin\left(\sin\frac{-13\pi}{20}\right) =$$

$$(c) \arccos\left(\cos\frac{55\pi}{18}\right) =$$

$$(d) \csc\left(\cot^{-1}\left(\frac{7}{2}\right)\right) =$$

$$(e) \tan\left(\cos^{-1}\left(-\frac{4}{5}\right)\right) =$$

$$(f) \cos\left(\csc^{-1}\left(\frac{3}{2}\right)\right) =$$

$$(g) \cos(\arccos 2.71) =$$

$$(h) \arccos(\cos 2.71) =$$

$$(i) \sin(\arcsin 1.5) =$$

$$(j) \arcsin(\sin 1.5) =$$

$$(k) \tan\left(\tan^{-1}(-0.9)\right) =$$

$$(l) \tan^{-1}(\tan(-0.9)) =$$

$$(m) \arctan\left(\cot\left(\frac{3\pi}{4}\right)\right) =$$

$$(n) \tan(\arccos(0)) =$$

$$(o) \csc\left(\arctan\left(\frac{-\sqrt{3}}{3}\right)\right) =$$