GSE PreCalculus Graphing Trig WS 4.8 Graphing Tan/Cot

x f(x) Vertical Shift:	Graph each function 1. $f(x) = 3 \tan x$	$n(2x-45^{\circ})-2$		2. $f(x) = -2\cot(x - x)$	$-45^{\circ})+2$	
Vertical Shift:	eriod:	x	f(x)	Period:	x	f(x)
torizontal Shift	ertical Shift:			Vertical Shift:		
tart: ind:	lorizontal Shift			Horizontal Shift		
ind:	tart:			Start:		
nerements:	nd:			End:		
$f(x) = 2\cot(x - \frac{\pi}{2}) + 1$ $f(x)$ Period: $x f(x)$ Vertical Shift: $x f(x)$ Bart: $x f(x)$ Increments: $x f(x)$ Increments: $x f(x)$	ncrements:			Increments:		
3. $f(x) = 2\cot(x - \frac{x}{2}) + 1$ Period: x Vertical Shift: x Horizontal Shift. x End: x Increments: x					5π	
Vertical Shift: $f(x)$ Vertical Shift: $f(x)$ Horizontal Shift $f(x)$ Vertical Shift: $f(x)$ Start: $f(x)$ $f(x)$ $f(x)$ Increments: $f(x)$ $f(x)$ $f(x)$ Vertical Shift $f(x)$ $f(x)$ $f(x)$ Increments: $f(x)$ $f(x)$ $f(x)$ Vertical Shift $f(x)$ $f(x)$ $f(x)$ Increments: $f(x)$ $f(x)$ $f(x)$ Vertical Shift $f(x)$ $f(x)$ $f(x)$ Increments: $f(x)$ <	3. $f(x) = 2 \operatorname{co}$ Period:	$t(x-\frac{\pi}{2})+1$		4. $f(x) = -3\tan(x + $ Period:	$\left(\frac{3\pi}{4}\right)$	$f(\mathbf{x})$
Horizontal Shift	Vertical Shift:	<i>X</i>	f(x)	Vertical Shift:		<i>J</i> (<i>x</i>)
Start:	Horizontal Shift			Horizontal Shift		
End:	Start:			Start:		
	End:			End:		
	Increments:			Increments:		

Name_____ Date_____Period_____

GSE PreCalculus Graphing Trig WS 4.8 Graphing Tan/Cot		Name DatePeriod		
(2x) - 2		$f(x) = \cot(x+18)$	$0^{\circ})+2$	
x	f(x)	Period:	x	f(x)
		Vertical Shift:		
		Horizontal Shift		
		Start:		
		End:		
		Increments:		
	phing Trig n/Cot $(2x) - 2$ x $-$ x $-$ x $-$ x $-$ x $-$ x $-$ x	x $f(x)$ (2x) - 2	phing Trig Name n/Cot Date $(2x) - 2$ 6. $f(x) = cot(x+18)$ x $f(x)$	phing Trig Name Date Period $(2x) - 2$ 6. $f(x) = \cot(x + 180^\circ) + 2$ x $f(x)$ Period: x $f(x)$ Name x $f(x)$ x x $f(x)$ Period: x $f(x)$ x x $f(x)$ x x $f(x)$ x x x $f(x)$ x x x $f(x)$ x <th< td=""></th<>

- 7. Steamboat Problem Mark Twain sat on the deck of a river steamboat. As the paddlewheel turned, a point on the paddle blade moved in such a way that its distance, d, from the water's surface was a sinusoidal function of time. When his stopwatch read 2 s, the point was at its highest, 18 ft above the waters surface. The wheels diameter was 22 ft, and it completed a revolution every 10 s
- a. Sketch a graph of this sinusoid.
- b. Write an equation of the sinusoid.

- c. Predict your height above the ground when
- i. *t* = 0
- ii. t = 3
- iii. *t*= 4
- iv. *t=8*
- v. t=12
- d. What is the first positive value of time at which the point was at the water's surface? At that time, was it going into or coming out of the water? Explain.