Graphing Sine and Cosine – WS #4 Name _____

For each problem, determine the domain, range, amplitude, and period. Then graph. For #'s 1-2 θ is in degrees:

1) $y = 1 + \sin\left(\frac{\theta}{2} - 50^o\right)$

Domain: _____ Range: _____

Amplitude: _____ Period: _____

Vertical Shift _____ Phase shift _____

2) $y = -2\cos\left(\theta + 20^o\right) + 4$

Domain: _____ Range: _____

Amplitude: _____ Period: _____

Vertical Shift _____ Phase shift _____

For each problem, determine the domain, range, amplitude, and period. Then graph. For #'s 3-4 θ is in radians:

3) $y = -1 + 5\cos\left(2\theta - 60^o\right)$

Domain: _____ Range: _____

Amplitude: _____ Period: _____

Vertical Shift _____ Phase shift _____

4) $y = -2\sin\left(\theta\right) + 2$

Domain: _____ Range: _____

Amplitude: _____ Period: _____

Vertical Shift _____ Phase shift _____