Self-Evaluation

Take your time and complete as much as you can. Show all your work.

1. Find the equation of the line between the points (1,2) and (3,4).

2. Solve the following system of equations:

$x + y = 6$ and $-3x + y = 2$

3. Solve the inequalities

A. $3 \leq -6 - 5x < 12$

B. $|x - 2| = 4$

4. Evaluate

A. 5^{-2}

b. $(\frac{a}{b})^{x-1} = (\frac{b}{a})^{x-3}$

find x

5. Write $3^2 = 9$ in logarithmic form.

6. Solve $3^{2x} = 3^{x+1}$

7. Graph y = 3 cos(3x − π). State the period, amplitude, phase shift and label the key points.

8. A 20-ft ladder leans against a building so that the angle between the ground and the ladder is 72 degrees. How high does the ladder reach on the building?

9. Given $tan\theta = \frac{72}{5}$ and θ is acute, what is the value of $cos\theta$?