

## NO Calculator Trig Equation and Log properties practice

Solve each equation for  $0 \leq \theta < 2\pi$ .

1)  $-4\sqrt{2} = -8\cos \theta$

2)  $-2 + \sin \theta = -3$

3)  $\frac{12 + \sqrt{3}}{3} = 4 + \tan \theta$

4)  $3 + \frac{1}{2} \cdot \sin -4\theta = \frac{6 + \sqrt{2}}{2}$

5)  $-4 = -2 + 2\cos 3\theta$

6)  $-4 - \frac{2}{5} \cdot \cos -\theta = -\frac{19}{5}$

Use the properties of logarithms and the logarithms provided to rewrite each logarithm in terms of the variables given.

7)  $\log_8 9 = A$

$\log_8 7 = B$

$\log_8 12 = C$

Find  $\log_8 \frac{1}{18}$

8)  $\log 9 = U$

$\log 6 = V$

$\log 11 = W$

Find  $\log \frac{27}{5}$

9)  $\log 8 = M$

$\log 12 = P$

$\log 9 = Q$

Find  $\log 972$

10)  $\log_9 6 = A$

$\log_9 8 = B$

$\log_9 11 = C$

Find  $\log_9 \frac{9}{64}$

11)  $\log_8 9 = X$

$\log_8 12 = Y$

$\log_8 7 = Z$

Find  $\log_8 \frac{7}{144}$

12)  $\log_9 10 = R$

$\log_9 11 = S$

$\log_9 6 = T$

Find  $\log_9 1000$