

Answer the following. See how many you can remember.

Write in exponential form and solve (no calculator).

1.  $\log_2 16 = x$

$$2^x = 16$$

$$x = 4$$

2.  $\log_3 81 = x$

$$3^x = 81$$

$$x = 4$$

3.  $\log_{25} 1 = x$

$$25^x = 1$$

$$x = 0$$

4.  $\log_{16} 2 = x$

$$16^x = 2$$

$$x = \frac{1}{4}$$

5.  $\log_2 \frac{1}{8} = x$

$$2^x = \frac{1}{8}$$

$$x = -3$$

6.  $\log_9 \frac{1}{3} = x$

$$9^x = \frac{1}{3}$$

$$x = -\frac{1}{2}$$

7.  $\log_x 8 = 3$

$$\sqrt[3]{x^3} = \sqrt[3]{8}$$

$$x = 2$$

8.  $\log_x 16 = 2$

$$\sqrt{x^2} = \sqrt{16}$$

$$x = \pm 4$$

bases only +

$$x = 4$$

9.  $\log_5 x = 2$

$$5^2 = x$$

$$25 = x$$

10.  $\log_5 x = 3$

$$5^3 = x$$

$$125 = x$$