

## Logarithm Exercises

1. Let the amount of air pollution in a room be given by

$$P(t) = 52000(0.8)^t . \tag{1}$$

At what time  $t$  is the amount of air pollution equal to 10,000?

2. Sketch  $f(x) = \log x$  and  $g(x) = 10^x$ . How are the two graphs related?

3. Solve for  $z$ :

(a)  $10^z = 20 . \tag{2}$

(b)  $2^{3z} = 20 . \tag{3}$

(c)  $2^z = z + 4 . \tag{4}$