

# More Radical Equations

1. Complete solving the equations.

a.  $\sqrt{5x} = x$

$5x = \square$

b.  $\sqrt{2x+5} = x-7$

$2x+5 = \square$

c.  $\sqrt{\frac{x+1}{3}} = 5-x$

$\frac{\square}{\square} = (5-x)^2$

2. Solve the equations.

a.  $\sqrt{2x} = x + 20$

b.  $\sqrt{3-5w} = w + 10$

c.  $\sqrt{-y} - y - 6 = 0$

d.  $\sqrt{y^2 - 1} - 88 = 0$

e.  $\sqrt{\frac{z}{5}} - 2z = -1$

f.  $\sqrt{\frac{7-x}{6}} + x = 0$

3. The geometric mean of two numbers  $x$  and  $y$  is the square root of their product.

a. Find the geometric mean of 6 and 20.

b. Find the geometric mean of 14 and 28.

c. Calculate the difference between the geometric mean and the arithmetic mean of 5 and 6. Give your answer to the nearest thousandth.

4. The geometric mean of two numbers is 14. Find the two numbers, if one number is one fourth the other number.

5. The geometric mean of two numbers is  $\sqrt{884}$ . Find the two numbers, if the one number is three more than five times the other.