

1. Solve using the quadratic formula.

a) $x^2 = 2x + 1$

$$x^2 - 2x - 1 = 0$$

\uparrow \uparrow \uparrow
 $a=1$ $b=-2$ $c=-1$

$$x = \frac{-(-2) \pm \sqrt{(-2)^2 - 4(1)(-1)}}{2(1)}$$

$$= \frac{2 \pm \sqrt{4 + 4}}{2}$$

$$= \frac{2 \pm \sqrt{8}}{2}$$

$\sqrt{8} = \sqrt{4 \cdot 2} = 2\sqrt{2}$

$$= \frac{2 \pm 2\sqrt{2}}{2}$$

$$= 1 \pm \sqrt{2}$$

$$\boxed{\{1 \pm \sqrt{2}\}}$$

b) $4x^2 + 25 = 20x$

$$4x^2 - 20x + 25 = 0$$

\uparrow \uparrow \uparrow
 $a=4$ $b=-20$ $c=25$

$$x = \frac{-(-20) \pm \sqrt{(-20)^2 - 4(4)(25)}}{2(4)}$$

$$= \frac{20 \pm \sqrt{400 - 400}}{8}$$

$$= \frac{20 \pm \sqrt{0}}{8}$$

$$= \frac{20 \pm 0}{8}$$

$$= \frac{20}{8}$$

$$= \frac{5}{2}$$

$$\boxed{\left\{\frac{5}{2}\right\}}$$

Q: What word can be written forward, backward or upside down, and can still be read from left to right?