

$$1) 2x^2 = 16$$

$$2) (r+5)^2 = 17$$

1) <u>No</u> $\sqrt{2x^2} = \sqrt{16}$ $\frac{2x}{2} = \frac{4}{2}$ $x = 2$ $2x^2 = 16$ $2 \cdot 2^2 = 16$ No	<u>Yes</u> $\frac{2x^2}{2} = \frac{16}{2}$ $\sqrt{x^2} = \sqrt{8} = \pm 2\sqrt{2}$ $\sqrt{2} \quad \sqrt{4}$ $\sqrt{2} \quad 2$
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2) <u>No</u> distribute $(r+5)^2 = 17$ $r^2 + 25 = 17$ $\begin{array}{r} -25 \\ -25 \end{array}$ $\sqrt{r^2} = \sqrt{-8}$ $r = \sqrt{8}i$	<u>Yes</u> $\sqrt{(r+5)^2} = \sqrt{17}$ $r+5 = \pm\sqrt{17}$ $\begin{array}{r} -5 \\ -5 \end{array}$ $r = -5 \pm \sqrt{17}$
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$$(r+5)^2 \neq r^2 + 25$$

$$(r+5)(r+5) = r^2 + 5r + 5r + 25$$

or

$$(a+b)^2 = a^2 + 2ab + b^2$$

In the equation $(ax+3)^2 = 36$, a is a constant. If

$x = -3$ is one solution to the equation, what is a possible value of a ?

- A) -11
- B) -5
- C) -1
- D) 0

$$\sqrt{(ax+3)^2} = \pm\sqrt{36}$$

$ax+3 = 6$ $a(-3)+3 = 6$ $\begin{array}{r} -3a+3=6 \\ -3 \quad -3 \end{array}$ $\frac{-3a}{-3} = \frac{3}{-3}$ $a = -1$	$ax+3 = -6$ $a(-3)+3 = -6$ $\boxed{a = 3}$
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