

SQUARE ROOT PROPERTY

IF
 $P^2 = Q$
 THEN
 $P = \pm \sqrt{Q}$

14. $x^2 - 16 = 0$
 $x^2 = 16$
 $x = \pm \sqrt{16}$
 $x = \pm \sqrt{4 \cdot 4}$
 $x = \pm 4$

15. $x^2 - 7 = 0$
 $x^2 = 7$
 $x = \pm \sqrt{7}$

ZERO FACTOR PROPERTY

IF
 $PQ = 0$
 THEN
 $P = 0$ $Q = 0$

16. $x^2 - 7x + 10 = 0$
 $(x - 2)(x - 5) = 0$
 $x - 2 = 0$ $x - 5 = 0$
 $x = 2$ $x = 5$

PSD

	10		
P	≤	D	
1 · 10	11	9	
<u>2 · 5</u>	7	3	

POWER PRINCIPLE

TAKE BOTH SIDES
 TO A POWER
 BUT YOU HAVE
 TO CHECK
 ANSWERS

ex: $x = 2$
 $(x)^2 = (2)^2$
 $x^2 = 4$

17. $x^3 - 27 = 0$

$x^3 = 27$
 $x^{\frac{3}{1}} = 27$
 ← ODD, so no ±

$(x^{\frac{3}{1}})^{\frac{1}{3}} = 27^{\frac{1}{3}}$
 $x = \sqrt[3]{27}$
 $x = \sqrt[3]{3 \cdot 3 \cdot 3}$
 $x = 3$

18. $x^4 - 81 = 0$

$x^4 = 81$
 $x^{\frac{4}{1}} = 81$
 ← EVEN, SO PUT ±

$(x^{\frac{4}{1}})^{\frac{1}{4}} = \pm 81^{\frac{1}{4}}$
 $x = \pm \sqrt[4]{81}$

$x = \pm \sqrt[4]{3 \cdot 3 \cdot 3 \cdot 3}$
 $x = \pm 3$