Algebra - Lesson 10-4B

1) 64
2) 4
4) 16
5) 4
7) 144
10) -2
11) 22
12) 5
13) -2
15) 4
16) 1
18) 4
20) 4
22) 27
23) 2

$$\sqrt{x} + 3 = 11$$

$$-3 \qquad -3$$

$$\sqrt{x}^{2} = 8^{2}$$

$$x = 64$$

$$\sqrt{3x} - 5 = 4$$

$$+5 \quad +5$$

$$\left(\sqrt{3x}\right)^2 = 9^2$$

$$3x = 81$$

$$x = 27$$

$\sqrt{x+3} = 5$ (square both sides)

$x + 3 = 25$

$x = 22$

$\sqrt{x} + 3 = 5$

$-3 \quad -3$

$\sqrt{x} = 2$ (square both sides)

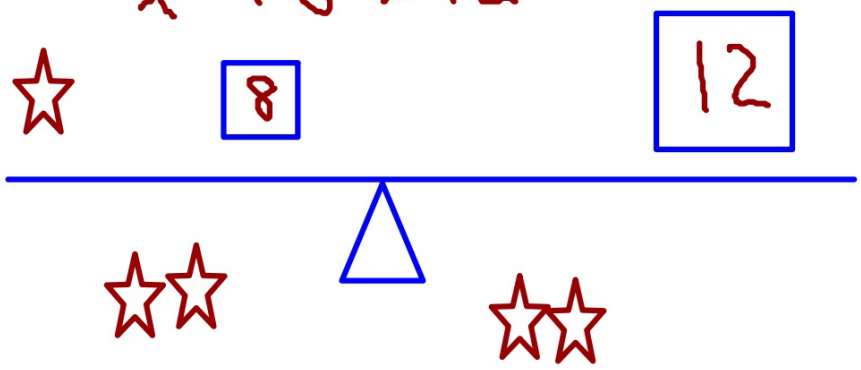
$x = 4$

$$\sqrt{3x+8} = \sqrt{2x+12}$$

$$3x + 8 = 2x + 12$$

$-2x \quad -2x$

$$x + 8 = 12$$



Solve each equation. Check your solution.

$\sqrt{x} - 3 = 4$

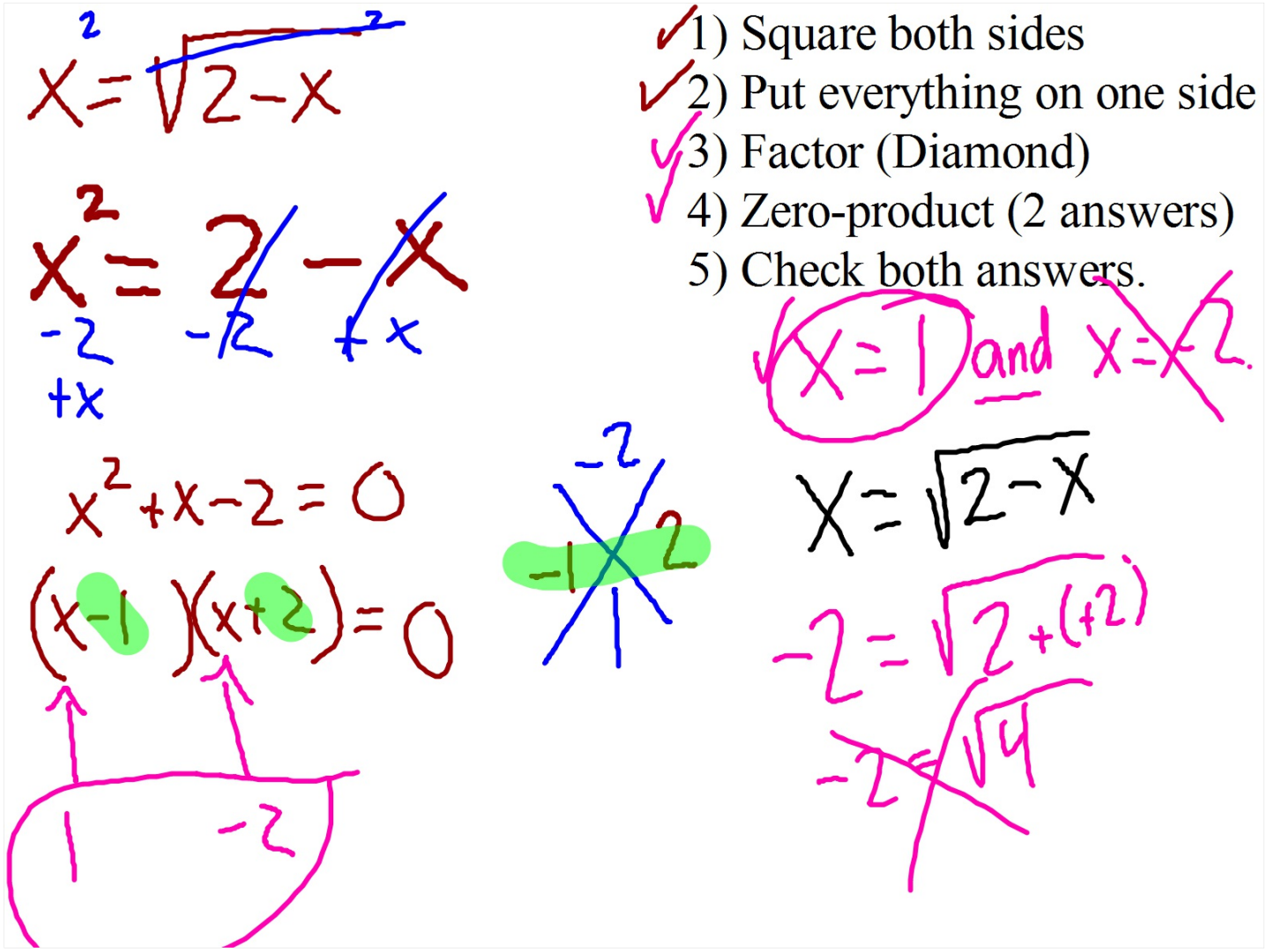
$\sqrt{x} = 7$

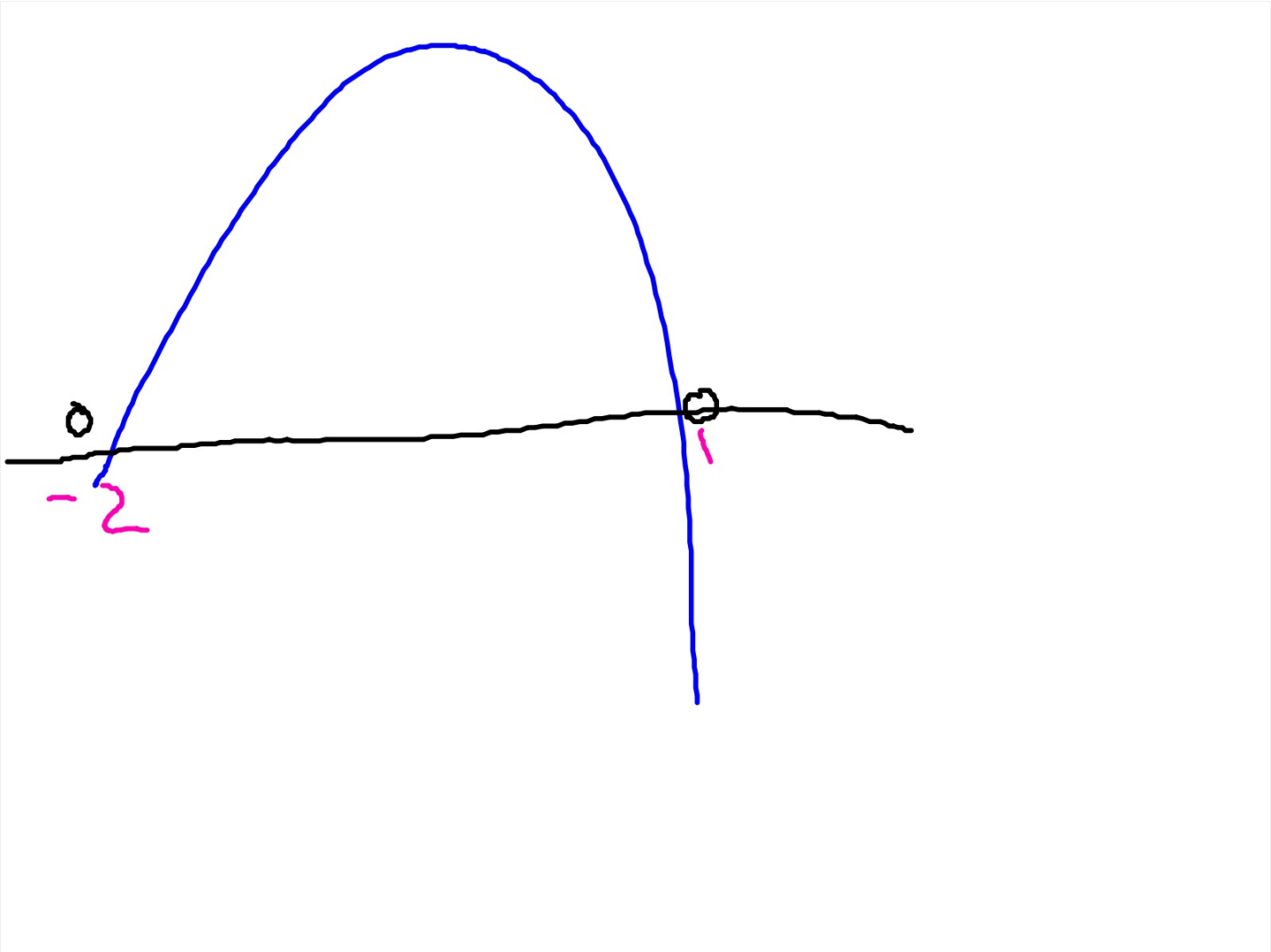
$x = 49$

$\sqrt{x - 3} = 4$

$x - 3 = 16$

$x = 19$


1) Square both sides
2) Put everything on one side
3) Factor (Diamond)
4) Zero-product (2 answers)
5) Check both answers.
$x = \sqrt{2-x}$
$x^2 = 2 - x$
$-2 \quad -2 \quad +x$
$+x$
$x^2 + x - 2 = 0$
$(x-1)(x+2) = 0$
1 -2
-2
-1 2
$x = 1$ and $x = -2$.
$x = \sqrt{2-x}$
$-2 = \sqrt{2+(+2)}$
$-2 = \sqrt{4}$


0
1
-2

$x = \sqrt{6+5x}$ (square both sides)

$x^2 = 6 + 5x$ (−5x −6)

$x^2 - 5x - 6 = 0$

$(x-6)(x+1) = 0$

$x = 6, \quad x = -1$

1) Square both sides
2) Put everything on one side
3) Factor (Diamond)
4) Zero-product (2 answers)
5) Check both answers.

$x = 6$ and ~~$x = -1$~~

$x = \sqrt{6+5x}$

$6 = \sqrt{6+5(6)}$

$-1 = \sqrt{6+5(-1)}$

#6, 17, 26

$x = \sqrt{11x - 28}$

$x^2 = 11x - 28$

$x^2 - 11x + 28 = 0$

$(x-4)(x-7) = 0$

4 7

28

-4×-7

-11

- ✓ 1) Square both sides
- ✓ 2) Put everything on one side
- ✓ 3) Factor (Diamond)
- ✓ 4) Zero-product (2 answers)
- ✓ 5) Check ~~both~~ answers.

$x = 4$ and $x = 7$

$x = \sqrt{11x - 28}$

$4 = \sqrt{11(4) - 28}$

$7 = \sqrt{11(7) - 28}$