

$$1. y = \sqrt{2x-5}$$

$$y = \sqrt{x+2}$$

$$(\sqrt{2x-5})^2 = (\sqrt{x+2})^2$$

$$2x-5 = x+2$$

$$-x \rightarrow \leftarrow +5$$

$$x = 7$$

$$y = \sqrt{7+2}$$

$$y = \sqrt{9}$$

$$y = 3$$

$$(7, 3)$$

Check

$$\sqrt{2(7)-5} = \sqrt{7+2}$$

$$\sqrt{9} = \sqrt{9}$$

$$2. y = \sqrt{20-x}$$

$$y = x$$

$$(\sqrt{20-x})^2 = (x)^2$$

$$20-x = x^2$$

$$\rightarrow \rightarrow$$

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

$$0 = (x+5)(x-4)$$

$$x = -5 \quad x = 4$$

$$y = 4$$

$$(4, 4)$$

check

$$\sqrt{20-(-5)} = -5$$

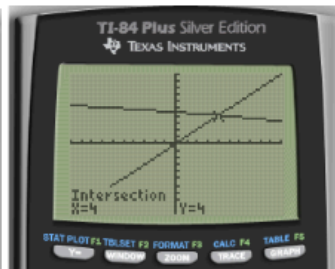
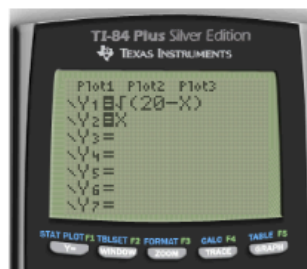
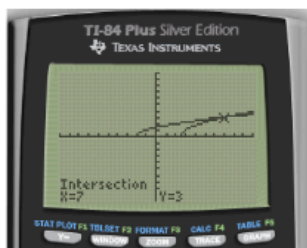
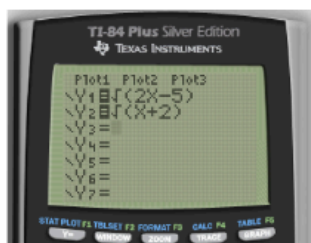
$$\sqrt{25} = -5$$

⊗ Ext.

$$\sqrt{20-4} = 4$$

$$\sqrt{16} = 4$$

✓



$$3. y = x-1$$

$$y = \sqrt{2x-2}$$

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

$$x^2 - 2x + 1 = 2x - 2$$

$$-2x + 2 \rightarrow \leftarrow \leftarrow$$

$$x^2 - 4x + 3 = 0$$

$$(x-3)(x-1) = 0$$

$$x = 3 \quad x = 1$$

$$y = 3-1 \quad y = 1-1$$

$$y = 2 \quad y = 0$$

$$(3, 2) \quad (1, 0)$$

Check

$$3-1 = \sqrt{2(3)-2}$$

$$2 = \sqrt{4}$$

$$1-1 = \sqrt{2(1)-2}$$

$$0 = \sqrt{0}$$

$$4. y = \sqrt{46-7x}$$

$$y = x-8$$

$$(\sqrt{46-7x})^2 = (x-8)^2$$

$$46 - 7x = x^2 - 16x + 64$$

$$\rightarrow \rightarrow \quad +7x - 46$$

$$0 = x^2 - 9x + 18$$

$$0 = (x-3)(x-6)$$

$$x = 3 \quad x = 6$$

No Solution

Check

$$\sqrt{46-7(3)} = 3-8$$

$$\sqrt{25} = -5$$

⊗ Ext.

$$\sqrt{46-7(6)} = 6-8$$

$$\sqrt{4} = -2$$

⊗ Ext.

