

Ex 2.5.14

$$a) \sqrt{7-x} = x-5 \quad | \quad ()^2$$

$$7-x = (x-5)^2$$

$$7-x = x^2 - 10x + 25$$

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

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

↓
3 ✗

↓
6 ✓

verif:

$$\sqrt{7-3} \stackrel{?}{=} 3-5$$

$$2 \neq -2$$

✗

$$\sqrt{7-6} \stackrel{?}{=} 6-5$$

$$1 = 1$$

✓

$$\Rightarrow S = \{6\}$$

2.5.14

$$\begin{array}{l|l} \text{d)} & x - \sqrt{-7x-24} = -2 & -x \\ & -\sqrt{-7x-24} = -2-x & \cdot (-1) \\ & \sqrt{-7x-24} = 2+x & (\)^2 \end{array}$$

$$-7x-24 = (2+x)^2$$

$$-7x-24 = 4+4x+x^2$$

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

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

↓ ↓
-7 -4 X

$$\begin{array}{l|l} \text{Vérif:} & -7 - \sqrt{+49-24} \stackrel{?}{=} -2 & -4 - \sqrt{28-24} \stackrel{?}{=} -2 \\ & -7 - 5 \neq -2 \quad X & -4 - 2 \neq -2 \quad X \end{array}$$

$\Rightarrow S = \emptyset$