NAME:_____

P.I. A2.A.22: Solve radical equations

Solve:

1. $\sqrt{x+4} + \sqrt{x} = 5$ [A] $\frac{21}{2}$ [B] no solution [C] $\frac{441}{100}$ [D] 441

2. $\sqrt{x-10} + \sqrt{x} = 4$

3. Use a graphing calculator to graph $s = \sqrt{15d}$. For approximately what value of *d* will *s* have a value of 25?

4. A certain gas will escape from a storage tank according to the formula $e = 160\sqrt{p}$, where *e* represents the amount escaping per minute in gallons, and *p* represents the pressure in pounds per square inch. What is the pressure on the gas when about 525 gallons per minute are escaping? Round your answer to the nearest tenth.

   [A] 10.8 lb/in.^{2} [B] 3.3 lb/in.^{2} [C] 0.3 lb/in.^{2} [D] 26.2 lb/in.^{2}

5. The sales of a certain product after an initial release can be found by the equation $s = 15\sqrt{6t} + 55$, where *s* represents the total sales and *t* represents the time in weeks after release. How many weeks will pass before the product sells about 275 units? Round your answer to the nearest week.

6. This table gives the price of some TVs according to the length of their diagonals.
   Use the formula $d = \sqrt{2A}$ to find the area of each television screen in the table. Which model has the lowest price per square inch of area?

Model Number	Length of Diagonal	Price
4CR-12	12 inches	$350
4CR-14	14 inches	$420
4CR-20	20 inches	$480
4CE-25	25 inches	$600

[1] C

[2] $\frac{169}{16}$

[3] Answers may vary. Sample: about 42

[4] A

[5] 36 weeks

[6] areas: 72 $in.^2$, 98 $in.^2$, 200 $in.^2$, 312.5 $in.^2$; lowest price per area: 25 inch TV.