Solving Square Root Equations Notes Notable Student: Date:

Now that we know what the square root function looks like graphed out, it's time to solve using the square root function.

1. The stopping distance for a car on dry pavement can be measured by the skid marks on the pavement after an accident. The initial speed of the car in miles per hour, s, is related to the distance it took to stop, d, in the equation $s = \sqrt{22d}$.

a. How fast was a car going if it left a skid mark of 130 feet?

b. If a car is traveling at 40 mph, how far will the car travel before it comes to a complete stop?

2. Rabob drops an egg from 25 feet above the ground. The formula $t = \frac{1}{4}\sqrt{25 - h}$ describes the height of the egg, h, after a number of seconds, t.

a. How long has the egg been falling when it is 16 feet high?

b. How far off the ground is the egg after 1 second?

Guidelines for solving square root equations:

Solve the following:

3. $3\sqrt{2x-1}+6=\ -12$

4. $3\sqrt{x-4}+30=21$

5. $\sqrt{2x+1}=\sqrt{x}$

6. $\frac{1}{2}\sqrt{2x+4}+3=2.5$

Homework Home Worker:
Date:

Solve the following equations, checking for extraneous solutions.

1. $10\sqrt{4x+1} - 50 = 0$

2. $\sqrt{x+4} + 6 = 7$

3. $2\sqrt{n-5} + 3 = -15$

4. $\sqrt{2n+3} = \sqrt{5n-8}$