Lesson 2.2 Square Roots

The **square** of a number is that number times itself. A square is expressed as 6^2, which means 6×6, or 6 squared. The **square root** of a number is the number that, multiplied by itself, equals that number. The square root of 36 is 6: $\sqrt{36} = 6$.

Not all square roots of numbers are whole numbers like 6. Numbers that have a whole number as their square root are called **perfect squares**.

The expression of a square root is called a **radical**. The symbol $\sqrt{}$ is called a **radical sign**. When a number is not a perfect square, you can estimate its square root by determining which perfect squares it comes between.

$\sqrt{50}$ is a little more than 7, because $\sqrt{49}$ is exactly 7. $\sqrt{60}$ is between 7 and 8 but closer to 8, because 60 is closer to 64 than to 49.

Identify the square root of these perfect squares.

	a	**b**	**c**
1.	$\sqrt{16}$ = _____	$\sqrt{64}$ = _____	$\sqrt{25}$ = _____
2.	$\sqrt{100}$ = _____	$\sqrt{1}$ = _____	$\sqrt{9}$ = _____
3.	$\sqrt{36}$ = _____	$\sqrt{81}$ = _____	$\sqrt{4}$ = _____

Estimate the following square roots.

4. $\sqrt{85}$ is between _____ and _____ but closer to _____ .

5. $\sqrt{20}$ is between _____ and _____ but closer to _____ .

6. $\sqrt{35}$ is between _____ and _____ but closer to _____ .

7. $\sqrt{70}$ is between _____ and _____ but closer to _____ .

8. $\sqrt{45}$ is between _____ and _____ but closer to _____ .