Section 9.1: Finding Square Roots Name: _____

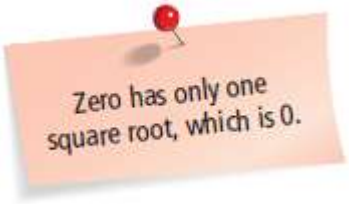
In Class Notes

A _____ _____ of a number p, is a number whose square is equal to p.

Every positive number has a _____ and _____ square root.

A _____ _____ is a number with integers as its square roots.

Ex:) Find the 2 square roots of 49. Notes:



OYO:) Find the 2 square roots of 36, 100, and 121. Notes:

The $\sqrt{}$ is called the _____ _____. The number under it is called

the _____.

- $\sqrt{p}$ represents the *positive* square root of p.
- $-\sqrt{p}$ represents the *negative* square root of p.
- $\pm\sqrt{p}$ represents *both* square roots of p.

Ex:) Find the square root(s). Notes:

a. $\sqrt{25}$ b. $-\sqrt{49}$ c. $\pm\sqrt{16}$

OYO:) Find the square root(s). Notes:

a. $\sqrt{4}$ b. $-\sqrt{81}$ c. $\pm\sqrt{64}$

Ex:) Find the square root(s). Notes:

a. $\sqrt{\frac{9}{16}}$ b. $\pm\sqrt{2.25}$

OYO:) Find the square root(s). Notes:

a. $-\sqrt{\frac{1}{100}}$ b. $\sqrt{12.25}$

Ex:) Evaluate the expression. Notes:

a. $5\sqrt{36}+7$ b. $\frac{1}{4}+\sqrt{\frac{18}{2}}$ c. $\left(\sqrt{81}\right)^2-5$

OYO:) Evaluate the expression. Notes:

a. $12-3\sqrt{25}$ b. $\sqrt{\frac{28}{7}}+2.4$ c. $15-\left(\sqrt{4}\right)^2$

Ex:) Solve each equation. Notes:

a. $x^2=81$

When solving an equation by taking square roots, take both the positive and the negative square roots.

b. $3a^2=48$

OYO:) Solve each equation. Notes:

a. $k^2=169$ b. $190=4b^2-6$

Ex:) The area of a crop circle is 45,216 square feet. What is the radius of the crop circle? (use 3.14 for π)

Notes:

OYO:) Your distance d (in miles) from the horizon can be approximated by $d = 1.22\sqrt{h}$,where h is your eye level (in feet above ground level). What is your eye level when you are 9.76 miles from the horizon?

Notes: