

Name Key Date _____

Radicals

$$\sqrt{\frac{144}{36}} = \sqrt{\frac{(12)(12)}{(6)(6)}} = \frac{12}{6} = 2$$

1 $\sqrt{16}$ 4

9 $\pm\sqrt{49}$ ± 7

2 $\sqrt{49}$ 7

10 $\pm\sqrt{169}$ ± 13

3 $(\sqrt{4})^2$ 4

11 $\pm\sqrt{1225}$ ± 35

4 $(\sqrt{121})^2$ 121

12 $\pm\sqrt{\frac{4}{36}}$ $\pm \frac{2}{6} = \pm \frac{1}{3}$

5 $-(\sqrt{43})^2$ -43

13 $\pm\sqrt{\frac{1}{256}}$ $\pm \frac{1}{16}$

6 $\sqrt{\frac{1}{64}}$ $\frac{1}{8}$

14 $\sqrt{\frac{81}{9}}$ $-\frac{9}{3} = -3$

7 $\sqrt{196}$ -14

15 $\sqrt{\frac{484}{100}}$ $-\frac{22}{10} = -\frac{11}{5}$

8 $\sqrt{\frac{36}{81}}$ $-\frac{6}{9} = -\frac{2}{3}$

16 $\sqrt{\frac{324}{729}}$ $-\frac{18}{27} = -\frac{6}{9} = -\frac{2}{3}$

Let's Play Ball



For the problems below, solve all the number sentences enclosed within the square root, and write your answers in the spaces provided. Then arrange all of the answers from least to greatest in the column on the right side of the page. Write the word found next to the answer in the corresponding boxes to reveal the answer to the riddle below.

Why did the toy poodle like to play baseball?

LEAST

- 1.) $\sqrt{3 \times 12 + (3 \times 5 - 2)} = \underline{7} = \text{HOME}$
- 2.) $\sqrt{28 \div 7 \times 4} + \sqrt{20 \times 5 - (24 - 5)} = \underline{13} = \text{GET}$
- 3.) $\sqrt{4 \times 9 + 12 + (7 \times 3 - 5)} = \underline{8} = \text{PLATE}$
- 4.) $\sqrt{25} + \sqrt{35 - (8 + 2)} + \sqrt{4} = \underline{12} = \text{TO}$
- 5.) $\sqrt{7 \times 5 - (12 - 2)} - \sqrt{(16 + 16) \div 8} = \underline{3} = \text{HE}$
- 6.) $\sqrt{72 \div 8} \times \sqrt{36 \div 4} = \underline{9} = \text{HE}$
- 7.) $\sqrt{24 - 16 + 1} \times \sqrt{40 \div 5 - 4} = \underline{6} = \text{TO}$
- 8.) $\sqrt{36 - (2 \times 10)} + \sqrt{49} + \sqrt{18 \div 2} = \underline{14} = \text{WALKED}$
- 9.) $\sqrt{7 + 3 + (8 \times 2) - 1} = \underline{5} = \text{UP}$
- 10.) $\sqrt{4 \times 8 + (4 \times 4 \times 2)} \div \sqrt{13 - 9} = \underline{4} = \text{GOT}$
- 11.) $\sqrt{(8 \times 12) - (5 \times 3)} + \sqrt{14 \times 2 \div 7} = \underline{11} = \text{SURE}$
- 12.) $\sqrt{36} - \sqrt{16} = \underline{2} = \text{WHENEVER}$
- 13.) $\sqrt{(8 \div 4 \times 15 - 5) \times 4} = \underline{10} = \text{WAS}$

2	= Whenever
3	= He
4	= Got
5	= Up
6	= To
7	= Home
8	= Plate
9	= He
10	= was
11	= Sure
12	= To
13	= Get
14	= Walked

GREATEST

$$1.) \sqrt{36+13}$$
$$\sqrt{49}$$
$$7$$

$$2.) \sqrt{4 \cdot 4} + \sqrt{100-19}$$
$$4 + \sqrt{81}$$
$$4+9$$
$$13$$

$$3.) \sqrt{36+12+16}$$
$$\sqrt{48+16}$$
$$\sqrt{64}$$
$$8$$

$$4.) 5 + \sqrt{35-10} + 2$$
$$5 + 5 + 2$$
$$12$$

$$5.) \sqrt{35-10} - \sqrt{32 \div 8}$$
$$5 - 2$$
$$3$$

$$6.) \sqrt{9} \cdot \sqrt{9}$$
$$3 \cdot 3$$
$$9$$

$$7.) \sqrt{9} \cdot \sqrt{8-4}$$
$$3 \cdot 2$$
$$6$$

$$8.) \sqrt{16} + \sqrt{49} + \sqrt{9}$$
$$4 + 7 + 3$$
$$14$$

$$9.) \sqrt{10+15}$$
$$5$$

$$10.) \sqrt{32+32} \div \sqrt{4}$$
$$8 \div 2$$
$$4$$

$$11.) \sqrt{96-15} + \sqrt{4}$$
$$\sqrt{81} + 2$$
$$9 + 2$$
$$11$$

$$12.) 6-4$$
$$2$$

$$13.) \sqrt{(2 \cdot 15 - 5) \cdot 4}$$
$$\sqrt{25 \cdot 4}$$
$$10$$