Grade 9 Math Section 1.1-1.2 Assignment Practice Sheet

Name: _____

1. What is $\left(\frac{7}{5}\right)^2$?

$\dfrac{49}{25}$

2. Determine $\sqrt{\frac{36}{81}}$

$\dfrac{6}{9} = \dfrac{2}{3}$

3. Square $\left(\frac{16}{25}\right)^2 =$

$\dfrac{256}{625}$

4. Find the square root of 0.0064 $\sqrt{0.0064}$

0.08

5. Determine the number whose square root is $\frac{1}{3}$ $\sqrt{?} = \frac{1}{3}$

$\left(\frac{1}{3}\right)^2 = \frac{1}{3} \times \frac{1}{3} = \frac{1}{9}$

6. Estimate $\sqrt{\frac{39}{71}}$ using benchmarks.

$= \sqrt{\frac{36}{64}} = \frac{6}{8} = \frac{3}{4}$

$\dfrac{3}{4}$

7. Estimate $\sqrt{23.6}$ to 1 decimal place.

4.9

8. Determine a number that has a square root between $(3.7)^2$ and $(3.8)^2$ 13.75 (answers may vary).

$13.69 \qquad 14.44$

So, any # between 13.69 and 14.44

9. Is $\frac{50}{98}$ a perfect square? Show why or why not.

$\div 2$
$\div 2$

Reduce to check

$\dfrac{50}{98} = \dfrac{25}{49}$ Since, $\frac{5}{7} \times \frac{5}{7} = \frac{25}{49}$, then yes $\frac{50}{98}$ is a perfect square.
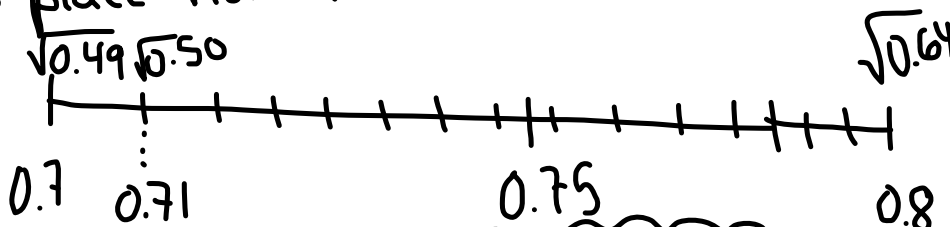
10. Estimate $\sqrt{0.5}$ to 2 decimal places. Show all steps.

$\sqrt{0.50}$ ← use 0 as place holder

$\sqrt{0.49} = 0.7$ $\sqrt{0.64} = 0.8$

$\sqrt{0.49}\,\sqrt{0.50}$ .... $\sqrt{0.64}$

0.7   0.71 .... 0.75 .... 0.8

Check: $(0.71)^2 = 0.5041$ $\sqrt{0.5} = 0.71$

Reduce fractions

11. Determine if each number is a perfect square:

A. $\frac{16}{35}$ B. $\frac{8}{50} \div 2$ ($\div 2$)   C. 0.16   D. 0.025

No, since you cannot mult. a # by itself to get 35 and the fraction is in simplest form.

$= \frac{4}{25}$

yes, since

$\frac{4}{25} = \frac{2}{5} \times \frac{2}{5}$

yes, since

$0.16 = 0.4 \times 0.4$

No, since thousandths is not a perf. square & you cannot mult. a # by itself to get 0.025

12. A square garden has an area of 7.84 m^2.

A. What is the length of 1 side?

Side length $= \sqrt{\text{Area}} = \sqrt{7.84} = 2.8m$

B. What is the perimeter of the garden?

Perimeter $= 4 \times$ side length $= 4 \times 2.8 = 11.2m$

C. If fencing costs $2.50 per metre, how much would it cost to fence the garden?

He will need 12 meters, so $12 \times 2.50 = \$30$

13. Place each square root correctly on the number line below:

$\sqrt{2.5},$ $= 1.58$

$\sqrt{20.25}.,$ $= 4.5$

$\sqrt{\frac{25}{16}},$ $= \frac{5}{4}$ $= 1.25$

$\sqrt{\frac{144}{9}},$ $= \frac{12}{3}$ $= 4$

$\sqrt{5}$ $\doteq 2.34$

$\sqrt{2.5}$ $\sqrt{5}$ $\sqrt{\frac{144}{9}}$

←——+——+——+——●—+●——+——●—+——+——+——●——+—●——+——→
0   1   2   3   4   5

$\sqrt{\frac{25}{16}}$ $\sqrt{20.25}$