

BIG Quiz Review

1. Convert between decimals, fractions, and percents.

0.15	$\frac{15}{100} = \frac{3}{20}$	15%
0.75	$\frac{3}{4}$	75%
0.45	$\frac{45}{100} = \frac{9}{20}$	45%
0.666666.....	$\frac{6}{9} = \frac{2}{3}$	66. $\bar{6}$ %
0.8	$\frac{4}{5}$	80%
.0001	$\frac{1}{10,000}$.01%

2. Find BOTH square roots for the following numbers:

1	1, -1
25	5, -5
64	8, -8
16	4, -4
121	11, -11
144	12, -12
49	7, -7
4	2, -2

3. Evaluate.

$$\sqrt{9} = 3$$

$$-\sqrt{25} = -5$$

$$\sqrt{-16} = \text{NP}$$

$$-\sqrt{-4} = \text{NP}$$

$$-\sqrt{100} = -10$$

4. Estimate each square root to the nearest tenth.

$$\frac{8}{\sqrt{36}} \sqrt{44} \frac{5}{\sqrt{49}} = 6.6$$

$$\frac{3}{\sqrt{36}} \sqrt{39} \frac{10}{\sqrt{49}} = 6.2$$

$$\frac{9}{\sqrt{81}} \sqrt{90} \frac{10}{\sqrt{100}} = 9.5$$

$$\frac{-\sqrt{3}}{\sqrt{1}} \frac{\sqrt{4}}{2} = -1.7$$

$$\sqrt{-10} = \text{NP}$$

5. Evaluate.

$$1^3 = 1$$

$$2^3 = 8$$

$$3^3 = 27$$

$$4^3 = 64$$

$$5^3 = 125$$

square #s 1, 4, 9, 16, 25, 36, 49, 64, 81, 100

6. Evaluate each completely.

$$\sqrt{80 - 10 + 5 \cdot 2 + 1}$$

$$\sqrt{80 - 10 + 10 + 1}$$

$$\sqrt{70 + 10 + 1}$$

$$\sqrt{80 + 1}$$

$$\sqrt{81}$$

$$\boxed{9}$$

$$\sqrt{40 - 2 \cdot 2} + \sqrt{20 + 8 \cdot 2}$$

$$\sqrt{40 - 4} + \sqrt{20 + 16}$$

$$\sqrt{36} + \sqrt{36}$$

$$6 + 6$$

$$\boxed{12}$$

7. Classify each number as rational or irrational and explain why.

0.1414141414.....

Rational / Irrational

Why?

repeats

0.14

Rational / Irrational

Why?

terminates

35

Rational / Irrational

Why?

terminates

$\sqrt{36} = 6$

Rational / Irrational

Why?

terminates

$\sqrt{37}$

Rational / Irrational

Why?

doesn't terminate or repeat.

8. Which of the following are written in scientific notation? (Circle the correct answers.)

$(45) \times 10^4$

Not between

1 & 10

4.5×10^{10}

$6.7 + 10^2$

should be
mult.

8.5^{-8}

No $\times 10$

8.1×10^{-43}

9. Write the following numbers in scientific notation.

540,000,000

1,000,000,000,000

0.0000000000000045

0.00003

5.4×10^8

1×10^{12}

4.5×10^{-15}

3×10^{-5}

10. Write the following numbers in standard notation.

5.5×10^8

9.346×10^{10}

1.45×10^{-6}

6.897×10^{-15}

550,000,000

93,460,000,000

0.00000145

0.000000000000006897

$\boxed{550,000,000}$

$\boxed{93,460,000,000}$

$\boxed{0.00000145}$

$\boxed{0.000000000000006897}$