

Name: Key

Practice BIG QUIZ: Fractions, Decimals, %, Square Roots, Cube Roots, Rational, Irrational, & Scientific Notation

1. Fill in the table at the right. Make sure your fractions are reduced.

Percents	Decimals	Fractions
62%	0.62	$\frac{62}{100} = \frac{31}{50}$
44. $\bar{4}$ %	. $\bar{4}$	$\frac{4}{9}$
324%	3.24	$3\frac{24}{100} = 3\frac{6}{25}$
17%	.17	$\frac{17}{100}$
80%	.8	$\frac{4}{5}$
8%	.08	$\frac{8}{100} = \frac{4}{50} = \frac{2}{25}$

For 2–6, find the TWO square roots for each.

2. 196

± 14

3. 289

± 17

4. 169

± 13

5. 121

± 11

6. 400

± 20

For 7–11, find the square root to the nearest TENTH for each.

7. $\sqrt{67}$

8.2

8. $\sqrt{8}$

2.8

9. $\sqrt{105}$

10.2

10. $\sqrt{39}$

6.2

11. $\sqrt{23}$

4.8

For 12–16, find the cube root for each.

12. 125

5

13. 27

3

14. 216

6

15. 8

2

16. 512

8

For 17–24, evaluate each completely.

17.

$$\sqrt[3]{512}$$

$$8$$

18.

$$\sqrt{\frac{49}{9}}$$

$$\frac{7}{3}$$

19.

$$\sqrt[3]{\frac{27}{64}}$$

$$\frac{3}{4}$$

20.

$$\sqrt{\frac{144}{16}}$$

$$\frac{12}{4} = 3$$

21.

$$\pm \sqrt{\frac{36}{81}}$$

$$\pm \frac{6}{9} = \pm \frac{2}{3}$$

22. $\sqrt{16} + \sqrt{30 - 5}$

$$4 + \sqrt{25}$$

$$4 + 5$$

$$9$$

23. $\sqrt{16 + 3 \cdot 3}$

$$\sqrt{16 + 9}$$

$$\sqrt{25}$$

$$5$$

24. $\sqrt{8 - 2 \cdot 2 + 12 \div 4 + 2}$

$$\sqrt{8 - 4 + 3 + 2}$$

$$\sqrt{4 + 3 + 2}$$

$$\sqrt{9}$$

$$3$$

For 25–28, determine whether or not each one is rational or irrational. Write "R" for Rational or write "I" for Irrational.

25. 0.11223344...

I

26. $\sqrt{40}$

I

27. 0.20220222...

I

28. $\sqrt{64}$

R

For 29–32, identify if each is in scientific notation. Write "Y" for yes or "N" for no.

29. $2.64 \oplus 10^7$

N

30. $5.412 \cdot 10^{19}$

Y

31. $9.24 \cdot \textcircled{100}^{10}$

N

32. $2.4 \cdot 10^{-978}$

Y

For 33–35, write each problem in scientific notation.

33. 0.000008516

$$8.516 \times 10^{-6}$$

34. 84,600,000,000

$$8.46 \times 10^{10}$$

35. 0.0005814

$$5.814 \times 10^{-4}$$