Subject: Math **Unit:** Number Concepts

Lesson: Two

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## The Rational Number System **Multiple Choice Quiz**

1. Classify 56/3.

b. real, rational a. real

c. real, rational, whole, integer d. real, rational, integer

2. Classify  $\sqrt{3}$ 

a. irrational b. rational

d. real, rational, integer c. real, irrational

3. Classify  $48 + \sqrt{36}$ 

a. real, rational, whole, natural, integer b. real, irrational

c. real, irrational, whole, integer d. real, rational, whole, integer

4. Classify  $\sqrt{63}$ 

a. real, irrational b. real, rational

c. real, rational, integer d. real, rational, whole, integer, natural

5. Classify 1/3

a. real, irrational b. real, rational, integer

c. real, rational, whole, natural d. real, rational, whole, natural, integer

6. Classify 0.3527974...

b. real, rational, integer a. real, rational, whole

c. real, irrational, whole d. real, irrational



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7. Classify 0

- a. real, irrational b. real, rational, whole, natural, integer
- c. real, rational, whole, integer d. real, rational, integer

8. Classify  $\sqrt{100}$ 

- a. real, rational, whole, natural, integer
- b. real, irrational, integer c. real, whole, integer d. rational
- 9. Which of the following numbers are real?
  - a.  $\sqrt{7}$  b. 0.5364923 c.  $\frac{1}{2}$  d. All of the above
- 10. Which of the following numbers are irrational?
  - a. 4,539 b. 0.254254 c.  $\sqrt{2}$  d. 1/3

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## The Rational Number System **Multiple Choice Quiz Solutions**

1. Classify 56/3

b. real, rational a. real

c. real, rational, whole, integer d. real, rational, integer Correct Answer is: D - Real, rational, and integer because 18.6666.. is a repeating decimal but decimals cannot be whole numbers.

- 2. Classify  $\sqrt{3}$
- a. irrational b. rational
- c. real, irrational d. real, rational, integer

Correct Answer is: C - Real, irrational because the decimal, 1.7320508... does not repeat or terminate.

- 3. Classify  $48 + \sqrt{36}$
- a. real, rational, whole, natural, integer b. real, irrational
- c. real, irrational, whole, integer d. real, rational, whole, integer

Correct Answer is: A - Real, rational, whole, natural, and integer because the answer is 54 when expressed in standard form.

4. Classify  $\sqrt{63}$ 

a. real, irrational b. real, rational

d. real, rational, whole, integer, natural c. real, rational, integer

Correct Answer is: A - Real, irrational because the decimal, 7.937253... does not repeat or terminate.



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- 5. Classify 1/3
- a. real, irrational b. real, rational, integer
- c. real, rational, whole, natural
- d. real, rational, whole, natural, integer

Correct Answer is: B - Real, rational, integer because the decimal, 0.3333...repeats.

- 6. Classify 0.3527974...
- a. real, rational, whole b. real, rational, integer
- c. real, irrational, whole d. real, irrational

Correct Answer is: D - Real, irrational because the decimal does not repeat or terminate.

- 7. Classify 0
- a. real, irrational b. real, rational, whole, natural, integer
- c. real, rational, whole, integer d. real, rational, integer

Correct Answer is: C - Real, rational, whole, integer because 0 is not considered a counting number 1, 2, 3, etc.

- 8. Classify  $\sqrt{100}$
- a. real, rational, whole, natural, integer b. real, irrational, integer
- c. real, whole, integer d. rational

Correct Answer is: A - Real, rational, whole, natural, integer because  $\sqrt{100}$  when expressed in standard form is 10.



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- 9. Which of the following numbers are real?
- a.  $\sqrt{7}$  b. 0.5364923 c.  $\frac{1}{2}$  d. All of the above Correct Answer is: D - Both rational and irrational numbers are real.
- 10. Which of the following numbers are irrational?

a. 4 539

b. 0.254254 c.  $\sqrt{2}$  d. 1/3

Correct Answer is: C -  $\sqrt{2}$  cannot be expressed as a fraction and, when written as a decimal, does not repeat or terminate.