

## 8th Math #2

## Subject: Mathematics

# State: Ohio

Student Name:\_\_\_\_\_

Teacher Name:\_\_\_\_\_

School Name:\_\_\_\_

1 Which subset of the real numbers contains  $\frac{3}{4}$ ?

(A) integers

- (B) natural numbers
- (C) rational numbers
- (D) irrational numbers



2 Which subset of real numbers contains  $\sqrt{5}$ ?

- (A) integers
- (B) whole numbers
- (C) rational numbers
- (D) irrational numbers



3 Represent each of the following rational numbers in fraction form:

- (a) 0.33<del>3</del>
- (b) 0.3<del>17</del>
- (c) 2.1<del>6</del>

4 Decide whether each of the following numbers is rational or irrational. If it is rational, explain how you know.

(a) 0.33<del>3</del>

(b) √4

(c)  $\sqrt{2} = 1.414213...$ 

(d) 1.414213

(e)  $\pi = 3.141592...$ 

(f) 
$$\frac{\pi}{2}$$

(g) 11

(h)  $\frac{1}{7} = 0.\overline{142857}$ 

(i) 12.345656<del>5</del>6

5 Sharla's batting average in softball is 0.583. She wants to know the fraction equivalent to the decimal.

Which fraction represents Sharla's batting average?

 $(A)\frac{5}{8}$  $(B)\frac{5}{9}$  $(C)\frac{7}{11}$  $(D)\,\frac{7}{12}$ 



6 Look at these numbers.

#### 2, 3, 5, 7

Classify the numbers by circling all of the following words that apply to them.

(A) integer

(B) irrational

(C) rational

(D) real



7 Which of the following numbers is **not** a rational number?

- (A) –3
- (B) 2.7
- (C) √4
- (D) √5

8 Which statement is <u>not</u> true?

- (A) A repeating decimal can be expressed as a fraction.
- (B) A terminating decimal can be expressed as a fraction.
- (C) A non-terminating and non-repeating decimal can be expressed as a fraction.
- (D) A negative integer can be expressed as a fraction.



9 Which decimal is equivalent to  $\frac{6}{11}$ ?

- (A) 0.18<del>3</del>
- (B) 0.1<del>83</del>
- (C) 0.5<del>4</del>
- (D) 0.<del>54</del>





11 What fraction is equivalent to  $0.\overline{4}$ ?

12 What is the decimal equivalent of  $\frac{5}{6}$ ?

### 13 Which of the following is an irrational number?

(A)  $7.\overline{1234}$ (B) 7.9253481(C)  $\frac{2}{9}$ (D)  $\frac{2}{9}$  14 The length, in centimeters, of a diagonal of a rectangle is represented by the expression below.

 $\sqrt{11^2 + 14^2}$ 

Which of the following is closest to the length of the diagonal?

- (A) 5 centimeters
- (B) 7 centimeters
- (C) 18 centimeters
- (D) 25 centimeters

15 The volume of a cube is 24 cubic inches. Which of the following estimates is closest to the length of each edge of the cube?

- (A) 4.9 inches
- (B) 3.1 inches
- (C) 2.9 inches
- (D) 2.5 inches