

Name:

Date:

Period:

Classify each number below as either rational or irrational. If you believe your number is rational, prove your answer by writing it as a fraction. The first one is done for you.

| | Rational or Irrational? | Fraction? |
|-----------------|-------------------------|---------------------------------|
| 0.8 | Rational | $\frac{8}{10}$ or $\frac{4}{5}$ |
| $-\frac{3}{10}$ | | |
| $\sqrt{40}$ | | |
| $\sqrt{81}$ | | |
| $2\frac{1}{3}$ | | |
| 0.35 | | |
| 0.3333.... | | |
| -9 | | |
| 3.4 | | |
| $\sqrt{2}$ | | |

Directions: For each number shown, classify it as either rational or irrational, then tell whether or not it is terminating or repeating.

(circle one)

(circle one)

- | | | |
|--------------------|------------------------|------------------------------------|
| 11) -0.6 | rational or irrational | terminating, repeating, or neither |
| 12) $\sqrt{100}$ | rational or irrational | terminating, repeating, or neither |
| 13) $\frac{2}{5}$ | rational or irrational | terminating, repeating, or neither |
| 14) $-\frac{2}{3}$ | rational or irrational | terminating, repeating, or neither |
| 15) 0.35217534... | rational or irrational | terminating, repeating, or neither |

16) Which of the following is equivalent to $\frac{3}{8}$?

a) 0.3

b) 0.45

c) 0.6

d) 0.375

17) Which of the following numbers is irrational?

a) 0.252525...

b) 0.875

c) 0.3754152...

d) -0.121212...

18) Which of the following numbers is rational?

a) $\sqrt{30}$

b) $\sqrt{42}$

c) $\sqrt{64}$

d) -0.125374...

19) Which of the following numbers is a terminating decimal?

a) $\sqrt{12}$

b) $\frac{7}{8}$

c) $\frac{5}{11}$

d) 0.81818181...

Mixed Review

Write each mixed number as an improper fraction.

20) $4\frac{3}{5}$

21) $-2\frac{2}{3}$

22) $11\frac{3}{7}$

Compare the numbers below using $>$, $<$, or $=$.

23) -14 _____ -12

24) $|-5|$ _____ $|-3|$

25) -3.2 _____ -32

Place the numbers on the number line below.

26) 3.5

27) 3.7

28) 4.8

29) 3.05

