Name _____ Date _____ Class _____

MODULE 9

# Real Numbers Review

## *Module Quiz: B*

1. Which expression shows a decimal equivalent to the fraction $\frac{13}{32}$?

   A 0.41 C 0.40625

   B 0.406 D 0.4625

2. Which fraction equals a repeating decimal?

   A $\frac{5}{80}$ C $\frac{17}{85}$

   B $\frac{11}{88}$ D $\frac{18}{81}$

3. Which number is a perfect square?

   A 249 C 265

   B 256 D 281

4. If $\sqrt{n} = \frac{3}{2}$, what is $-\sqrt{n}$?

   A $-\frac{3}{2}$ C $\frac{1}{2}$

   B $-\frac{2}{3}$ D $\frac{2}{3}$

5. A square playing field has an area of 1,255 square yards. About how long is each side of the field?

   A 12.55 yards C 35 yards

   B 2.55 yards D 55 yards

6. Which is an estimate of $\sqrt{35}$ to the nearest hundredth?

   A 3.5 C 5.91

   B 5.29 D 5.92

7. Which value of *n* will make the rational number $-\frac{17}{n}$ an integer?

   A 18 C 170

   B 102 D none of these

8. Which of these is **most** likely to describe the change received from a cash purchase?

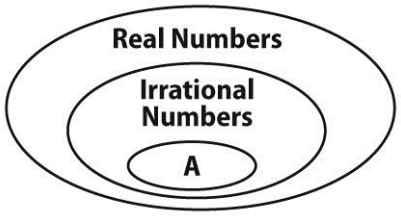
   A whole number

   B negative integer

   C rational number

   D irrational number

9. Which term for set A makes this diagram true?




   A Whole Numbers

   B Rational Numbers

   C Integers

   D none of these

10. Which statement is false?

    A Some integers are irrational.

    B Some integers are whole numbers.

    C Some rational numbers are integers.

    D Some real numbers are irrational.

11. Which number is between $\frac{17}{4}$ and $\sqrt{20}$?

    A $\sqrt{28} - 1.5$ C $2 + \sqrt{8}$

    B $\pi + 1.2$ D $\frac{5\pi}{3}$

12. Which is the greatest number?

    A $50 - 16\pi$ C $-\sqrt{20} + \frac{1}{2}$

    B $16 - \sqrt{410}$ D $\frac{7}{3} - \frac{7\pi}{3}$

13. Is $\frac{11}{128}$ equal to a terminating decimal or a repeating decimal? Explain how you know.

_____

14. Write $2\frac{1}{16}$ as a decimal.

_____

15. Express the fraction $\frac{11}{30}$ in decimal form.

_____

16. How many digits are there in the repeating block for the decimal equivalent of $\frac{3}{7}$?

_____

17. Find the two square roots of $\frac{9}{4}$.

_____

18. A number line is numbered in tenths. Describe where you would plot $\sqrt{87.35}$.

_____

19. Estimate $\sqrt{250}$ to two decimal places.

_____

20. Classify $\frac{\sqrt{64}}{5}$ as a whole number, integer, rational number, irrational number, or real number. Write all the names that apply.

_____

21. Write the principal square root of the integers between 320 and 325. Which of these is a rational number?

_____

**For 22–24, use the table.**

**Geometric Formulas**

| | |
|---|---|
| area of a circle | $A = pr^2$ |
| area of a triangle | $A = \frac{1}{2}bh$ |
| perimeter of a square | $P = 4s$ |
| volume of a sphere | $V = \frac{4}{3}\pi r^3$ |
| surface area of a sphere | $SA = 4pr^2$ |

22. Which formulas contain a rational number that is not an integer?

_____

23. Which formulas contain both a rational number and an irrational number?

_____

24. What kinds of numbers would not be sensible for the values of the variables?

_____

25. Find an integer between $\sqrt{30}$ and $\frac{4\pi}{3}$.

_____

26. Arrange the numbers in order from greatest to least.

$$\sqrt{150}, 11\frac{4}{9}, 4\pi$$

_____

Name _____ Date _____ Class_____

# MODULE 9 Real Numbers

## Module Quiz 9: B

1. C
2. D
3. B
4. A
5. C
6. D
7. D
8. C
9. D
10. A
11. B
12. A
13. terminating; the denominator is a power of 2
14. 2.0625
15. $0.3\overline{6}$
16. 6
17. $\frac{3}{2}, -\frac{3}{2}$
18. between 9.3 and 9.4
19. 15.81
20. rational number, real number
21. $\sqrt{320}, \sqrt{321}, \sqrt{322}, \sqrt{323}, \sqrt{324} = 18, \sqrt{325}$; $\sqrt{324}$ is a rational number
22. area of triangle, volume of sphere
23. volume of sphere, surface area of sphere
24. negative numbers
25. 5
26. $4\pi, \sqrt{150}, 11\frac{4}{9}$