Chapter 2.1 2.2 2.4 Review

Matching

Match each numerical solution to the appropriate expression. A solution may be used more than once or not at all..

A) −6.6   D) 2.53
B) 1.4   E) 53.3
C) 2.6   F) −8.4

1. A rational number equivalent to $2\frac{3}{5}$

2. $3.5 \times (-2.4)$

3. $-6.1 - (1.5 \div 3)$

4. $(9.6 + 3.4) \times (8.2 \div 2)$

5. $\sqrt{1.96}$

Match each square root with a letter from the number line below

A) A   D) D
B) B   E) E
C) C   F) F

6. $\sqrt{10}$

7. $\sqrt{56}$

8. $\sqrt{39}$

9. $\sqrt{7}$

10. $\sqrt{32}$

11. $\sqrt{98}$

Multiple Choice

_____ 12. Consider the following list of rational numbers. Which choice shows them in ascending order?

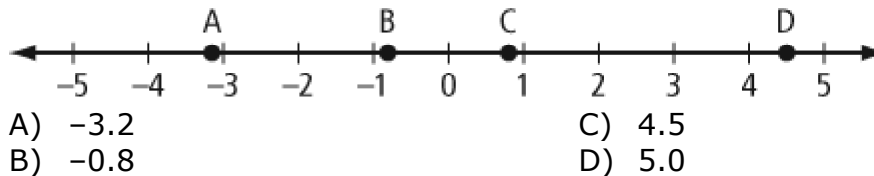$1\frac{2}{6}, -2\frac{1}{3}, 1\frac{12}{15}, 1\frac{23}{25}$

A) $-2\frac{1}{3}, 1\frac{2}{6}, 1\frac{12}{15}, 1\frac{23}{25}$ C) $1\frac{2}{6}, -2\frac{1}{3}, 1\frac{12}{15}, 1\frac{23}{25}$

B) $1\frac{23}{25}, 1\frac{12}{15}, 1\frac{2}{6}, -2\frac{1}{3}$ D) $1\frac{2}{6}, 1\frac{12}{15}, 1\frac{23}{25}, -2\frac{1}{3}$
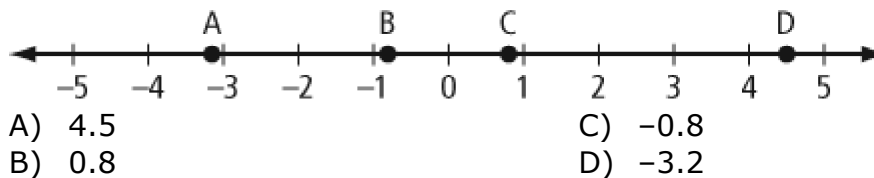
_____ 13. Order the rational numbers in descending order.

$1\frac{3}{8}, -3\frac{1}{3}, 1\frac{18}{20}, -1\frac{1}{5}$

A) $-3\frac{1}{3}, -1\frac{1}{5}, 1\frac{18}{20}, 1\frac{3}{8}$ C) $1\frac{3}{8}, -3\frac{1}{3}, -1\frac{1}{5}, 1\frac{18}{20}$

B) $1\frac{18}{20}, 1\frac{3}{8}, -1\frac{1}{5}, -3\frac{1}{3}$ D) $1\frac{3}{8}, 1\frac{18}{20}, -1\frac{1}{5}, -3\frac{1}{3}$
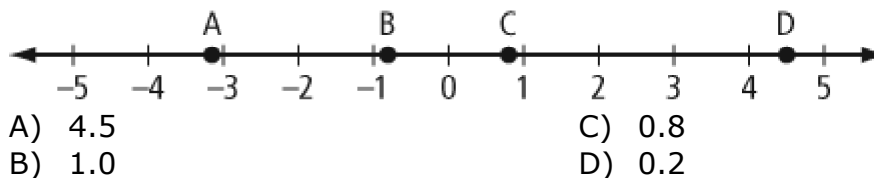
_____ 14. The rational number represented by point D on the number line is

A) −3.2   C) 4.5

B) −0.8   D) 5.0

_____ 15. What is the rational number represented by point A on the number line?

A) 4.5   C) −0.8

B) 0.8   D) −3.2

_____ 16. What rational number is represented by point C on the number line?

A) 4.5   C) 0.8

B) 1.0   D) 0.2

_____ 17. Determine the mixed number that falls between 1.2 and 1.3.

    A) $1\frac{4}{5}$ C) $1\frac{1}{4}$

    B) $1\frac{3}{4}$ D) $1\frac{1}{5}$

_____ 18. Which decimal number is equivalent to $\frac{3}{8}$?

    A) 0.125   C) 0.375
    B) 0.250   D) 0.500

_____ 19. Evaluate (−3.6)(4.2 − 3.5)
    A) −1.03   C) −4.32
    B) −2.52   D) −6.52

_____ 20. What is the value of $-2.8 \times 2.0 - [(-3.4) \times 1.7]$
    A) 1.02   C) 0.18
    B) 2.12   D) 3.58

_____ 21. What is the side length of a square with an area of 196 m²?
    A) 9 m   C) 49 m
    B) 14 m   D) 98 m

_____ 22. Determine the side length of a square with an area of 2.56 cm².
    A) 6.4 cm   C) 1.28 cm
    B) 1.6 cm   D) 0.64 cm

_____ 23. What is the area of a square with a side length of 8 units?
    A) 32 units   C) 64 units
    B) 32 square units   D) 64 square units

_____ 24. Evaluate $\sqrt{2.25}$
    A) 1.5   C) 0.15
    B) 15   D) 0.015

_____ 25. In professional baseball, the first base is a square with an area of 1444 cm². What is the length of one side of the base?
    A) 722 cm   C) 38 cm
    B) 361 cm   D) 12 cm

_____ 26. The area of a square horse corral is 232.26 m². Determine the length of fencing that is needed to enclose the corral.
    A) 15.24 m   C) 60.96 m
    B) 58.07 m   D) 116.13 m

Short Answer

27. Evaluate.

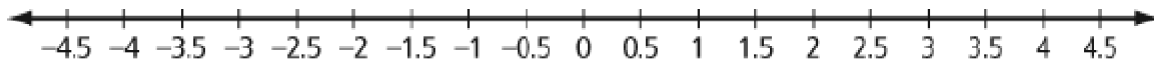   **a)** $\sqrt{1.69}$ **b)** $\sqrt{3.61}$ **c)** $\sqrt{0.09}$ **d)** $\sqrt{0.36}$

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28. Indicate where each number falls on the number line.

   a) 0.75   **b)** $-\frac{1}{3}$ **c)** $2\frac{4}{5}$ **d)** -3.5

   -4.5 -4 -3.5 -3 -2.5 -2 -1.5 -1 -0.5 0 0.5 1 1.5 2 2.5 3 3.5 4 4.5

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29. Replace each □ with >, <, or = to make each statement true.

   a) $\frac{2}{3}$ □ 0.6   **b)** $\frac{1}{4}$ □ 0.25   **c)** 1.52 □ $1\frac{1}{2}$

   d) $-\frac{3}{4}$ □ 0.75   **e)** -0.9 □ $-\frac{9}{11}$ **f)** 0.954 □ 0.946

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30. Jordan went to a pet shop and bought 8 tetra fish for $2.00 each, 3 goldfish for $2.75 each, and 2 angel fish for $3.75 each. What is the total cost of the fish, before taxes?

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31. There were 625 passengers on a 4.5 day cruise. Each passenger on the ship drank an average of 1.75 cups of juice per day. If juice costs $0.62 per cup, how much was the cost of the juice for the entire cruise? Round your answer to the nearest cent.