Name: _____ **Date:** _____ **Block:** _____

Mrs. van der Vossen

Math 9 Rational Numbers Review

Multiple Choice -- *Write your answer on the line beside the question (1 mark each)*

____ 1. Consider the following list of rational numbers. Which choice shows them in ascending order?
$1\frac{2}{7}, -2\frac{1}{3}, 1\frac{13}{14}, 1\frac{23}{24}$

A) $-2\frac{1}{3}, 1\frac{2}{7}, 1\frac{13}{14}, 1\frac{23}{24}$
C) $1\frac{2}{7}, -2\frac{1}{3}, 1\frac{13}{14}, 1\frac{23}{24}$
B) $1\frac{23}{24}, 1\frac{13}{14}, 1\frac{2}{7}, -2\frac{1}{3}$
D) $1\frac{2}{7}, 1\frac{13}{14}, 1\frac{23}{24}, -2\frac{1}{3}$

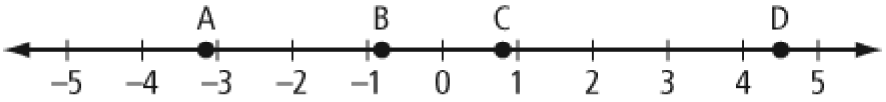
____ 2. Order the rational numbers in descending order.
$1\frac{3}{8}, -3\frac{1}{3}, 1\frac{15}{16}, -1\frac{10}{11}$

A) $-3\frac{1}{3}, -1\frac{10}{11}, 1\frac{15}{16}, 1\frac{3}{8}$
C) $1\frac{3}{8}, -3\frac{1}{3}, -1\frac{10}{11}, 1\frac{15}{16}$
B) $1\frac{15}{16}, 1\frac{3}{8}, -1\frac{10}{11}, -3\frac{1}{3}$
D) $1\frac{3}{8}, 1\frac{15}{16}, -1\frac{10}{11}, -3\frac{1}{3}$

____ 3. Which of the following sequences represents the numbers below written in descending order?
$\frac{8}{13}, 0.7, 0.1\overline{3}, \frac{7}{8}$

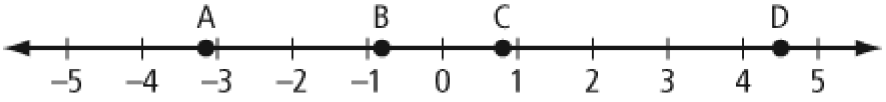
A) $0.1\overline{3}, 0.7, \frac{7}{8}, \frac{8}{13}$
C) $\frac{8}{13}, 0.7, \frac{7}{8}, 0.1\overline{3}$
B) $\frac{8}{13}, \frac{7}{8}, 0.1\overline{3}, 0.7$
D) $\frac{7}{8}, 0.7, \frac{8}{13}, 0.1\overline{3}$

____ 4. The rational number represented by point D on the number line is



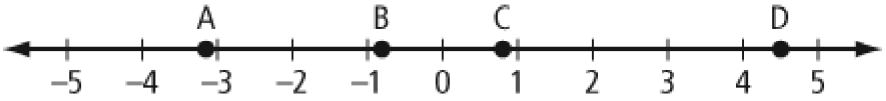
A) –3.2
C) 4.5
B) –0.8
D) 5.0

____ 5. 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

____ 6. What rational number is represented by point C on the number line?



A) 4.5
B) 1.0
C) 0.8
D) 0.2

____ 7. What fraction is equivalent to $\frac{5}{25}$?

A) $\frac{6}{10}$
B) $\frac{1}{5}$
C) $\frac{1}{6}$
D) $\frac{2}{15}$

____ 8. Determine the mixed number that falls between 1.2 and 1.3.

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

____ 9. Which decimal number is equivalent to $\frac{3}{8}$?

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

____ 10. Evaluate $(-3.6) \times (4.2 \div 3.5)$.

A) –1.03
B) –2.52
C) –4.32
D) –6.52

____ 11. What is the value of $(-5.6) \div 2.0 - (-3.4) \times 1.7$?

A) 1.02
B) 2.12
C) 2.98
D) 3.58

____ 12. When evaluating the expression $(-5.2) + 3.6 \div 0.5$, what number operation should be completed second?

A) addition
B) division
C) multiplication
D) subtraction

____ 13. Mountain climbers must prepare for cold temperatures as they approach the top of a mountain. The air temperature drops 6 °C for every 1000 m climbed. The height of Mount Waddington in British Columbia is 4016 m. If the temperature at the bottom of Mount Waddington is 13 °C, what is the temperature, to the nearest degree, at the top of the mountain?

A) 25 °C
B) 13 °C
C) –11 °C
D) –24 °C

____ 14. Evaluate $\frac{4}{9}+\frac{1}{6}\times\frac{2}{3}$.

A) $\frac{5}{9}$
C) $\frac{7}{9}$
B) $\frac{11}{18}$
D) $\frac{5}{6}$

____ 15. Evaluate $\frac{11}{21}+\frac{1}{3}$.

A) $\frac{13}{14}$
C) $\frac{3}{4}$
B) $\frac{6}{7}$
D) $\frac{2}{3}$

____ 16. What is the result of $\frac{1}{9}+\frac{1}{4}+\frac{7}{12}$?

A) $\frac{17}{18}$
C) $\frac{8}{9}$
B) $\frac{11}{12}$
D) $\frac{31}{36}$

____ 17. Evaluate $\frac{3}{4}-\frac{1}{5}-\frac{3}{10}$.

A) $\frac{1}{5}$
C) $\frac{3}{10}$
B) $\frac{1}{4}$
D) $\frac{7}{20}$

____ 18. The recycling bin was $\frac{1}{3}$ full at the beginning of the week. The bin was filled another $\frac{2}{5}$ by the end of the week. How full was the bin at the end of the week?

A) $\frac{2}{15}$
C) $\frac{11}{15}$
B) $\frac{1}{4}$
D) $\frac{5}{6}$

____ 19. Julia had $\frac{5}{6}$ of a pizza left over from a party. She gave Brooke $\frac{2}{5}$ of the leftover pizza. How much of the original pizza did Julia give to Brooke?

A) $\frac{7}{30}$
C) $\frac{7}{11}$
B) $\frac{1}{3}$
D) $\frac{2}{3}$

____ 20. Which of these numbers is a perfect square?

A) 68
C) 186
B) 92
D) 81

____ 21. Which of these numbers is not a perfect square?

A) 100
B) 0.09
C) 0.9
D) 0.36

____ 22. What is the side length of a square with an area of 196 m^2?

A) 9 m
B) 14 m
C) 49 m
D) 98 m

____ 23. Determine the side length of a square with an area of 2.56 cm^2.

A) 6.4 cm
B) 1.6 cm
C) 1.28 cm
D) 0.64 cm

____ 24. What is the area of a square with a side length of 8 units?

A) 32 units
B) 32 square units
C) 64 units
D) 64 square units

____ 25. Which expression represents the area of a square with a side length of 2.52?

A) 2.52×4
B) 2.52×2
C) 2.52×2.52
D) $2.52 \times 2.52 \times 2.52 \times 2.52$

____ 26. Evaluate $\sqrt{2.25}$.

A) 1.5
B) 15
C) 0.15
D) 0.015

____ 27. In professional baseball, the first base is a square with an area of 1444 cm^2. What is the length of one side of the base?

A) 722 cm
B) 361 cm
C) 38 cm
D) 12 cm

____ 28. The area of a square horse corral is 232.26 m^2. Determine the length of fencing that is needed to enclose the corral.

A) 15.24 m
B) 58.07 m
C) 60.96 m
D) 116.13 m

Completion *Complete each statement. (1 mark each)*

29. A fraction between the rational numbers 0.7 and 0.8 is _____.

30. The product of two rational numbers with different signs is _____.

31. $\square \times (-4.2) = 15.96$

The missing value in the statement is _____.

32. Written as an improper fraction, $2\frac{3}{4}$ is _____.

33. Written as a mixed number, $-\frac{17}{5}$ is _____.

34. The statement $\left(\frac{4}{7} \div \frac{4}{9}\right)$ is equal to _____.

35. A perfect square can be expressed as the _____ of two equal rational factors.

36. The side length of a square with an area of $\frac{9}{16}$ m^2 is _____.

Matching

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

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

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

38. $3.5 \times (-2.4)$

39. $-6.1 - (1.5 \div 3)$

40. $(9.6 + 3.4) \times (8.2 \div 2)$

41. $\sqrt{1.96}$

Short Answer *Complete the following questions. Remember units and proper rounding count for marks. Circle your answers and show your work. Marks as listed.*

42. Complete the expression with the symbols <, >, or =.

a) $\frac{5}{14} \square\ 0.4$ **b)** $2\frac{4}{7} \square\ 2\frac{3}{8}$

Math 9 Rational Numbers Review
Answer Section

MULTIPLE CHOICE

1. ANS: A OBJ: Section 2.1
2. ANS: B OBJ: Section 2.1
3. ANS: D OBJ: Section 2.1
4. ANS: C OBJ: Section 2.1
5. ANS: D OBJ: Section 2.1
6. ANS: C OBJ: Section 2.1
7. ANS: B OBJ: Section 2.1
8. ANS: C OBJ: Section 2.1
9. ANS: C OBJ: Section 2.1
10. ANS: C OBJ: Section 2.2
11. ANS: C OBJ: Section 2.2
12. ANS: A OBJ: Section 2.2
13. ANS: C OBJ: Section 2.2
14. ANS: A OBJ: Section 2.3
15. ANS: B OBJ: Section 2.3
16. ANS: A OBJ: Section 2.3
17. ANS: B OBJ: Section 2.3
18. ANS: C OBJ: Section 2.3
19. ANS: B OBJ: Section 2.3
20. ANS: D OBJ: Section 2.4
21. ANS: C OBJ: Section 2.4
22. ANS: B OBJ: Section 2.4
23. ANS: B OBJ: Section 2.4
24. ANS: D OBJ: Section 2.4
25. ANS: C OBJ: Section 2.4
26. ANS: A OBJ: Section 2.4
27. ANS: C OBJ: Section 2.4
28. ANS: C OBJ: Section 2.4