

Chapter 2 Practice Test

For #1 to #7, select the best answer.

1. Which fraction does not equal $\frac{4}{-6}$?

A $-\left(\frac{-10}{15}\right)$

B $\frac{8}{12}$

C $\frac{6}{-9}$

D $-\left(\frac{-2}{-3}\right)$

2. Which value is greater than $-1\frac{5}{6}$?

A $-1.\bar{8}$

B $-1\frac{7}{8}$

C $-1.8\bar{3}$

D $-1\frac{4}{5}$

3. Which fraction is between -0.34 and -0.36 ?

A $\frac{17}{50}$

B $\frac{9}{25}$

C $\frac{7}{20}$

D $\frac{35}{100}$

4. Which value equals $-3.78 - (-2.95)$?

A -6.73

B -0.83

C 0.83

D 6.73

5. Which expression does not equal $\frac{3}{5} \times \left(-\frac{6}{7}\right)$?

A $\frac{3}{7} \times \frac{6}{5}$

B $\frac{3}{-5} \times \frac{6}{7}$

C $\frac{-3}{5} \times \left(\frac{-6}{-7}\right)$

D $\frac{-3}{-5} \times \frac{6}{7}$

6. Which value is the best estimate for $\sqrt{1.6}$?

A 2.6

B 1.3

C 0.8

D 0.4

7. Which rational number is a non-perfect square?

A $\frac{1}{25}$

B 0.16

C 0.9

D $\frac{121}{4}$

Complete the statements in #8 and #9.

8. A square has an area of 1.44 m^2 . The perimeter of the square is $\blacksquare$ m.

9. On a number line, you would find $-3\frac{5}{11}$ to the $\blacksquare$ of -3.4545 .

Short Answer

10. Explain why any integer is a rational number.

11. Arrange the following in descending order.

$-1.\bar{2}$ -1.2 $\frac{19}{20}$ $\frac{9}{10}$ $\frac{9}{-10}$ $0.\bar{94}$

12. Identify the fractions in lowest terms that are between -2 and -3 and that have 6 as the denominator.

13. Calculate.

a) $1\frac{4}{5} - 2\frac{2}{3}$

b) $-3.21 + 1.84$

c) $\frac{5}{8} \div \left(-\frac{11}{12}\right)$

d) $-2\frac{5}{7} \left(-3\frac{1}{2}\right)$

e) $-3.66 \div (-1.5)$

f) $-\frac{5}{6} + \left(-\frac{1}{12}\right)$

14. Canada's Donovan Bailey won the gold medal in the 100-m sprint at the Summer Olympics in Atlanta in a time of 9.84 s. He beat the second-place finisher, Frankie Fredericks of Namibia, by $\frac{5}{100}$ of a second.

What was Fredericks's time?



15. What is the average of a rational number and its opposite? Explain using examples in decimal or fraction form.

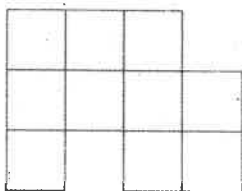
16. Is 31.36 a perfect square? Explain how you know.

17. Determine.

- a) the number with a square root of 6.1
- b) $\sqrt{0.1369}$
- c) $\sqrt{7}$, to the nearest hundredth

Extended Response

18. This shape is made from ten congruent squares.



- a) If the perimeter of the shape is 40 cm, what is its area?
- b) If the area of the shape is 75 cm², what is its perimeter, to the nearest tenth of a centimetre?

19. Ron buys 75 shares in a car company. A year later, he sells the shares for \$15.64 each. The result is a loss of \$260.25. How much did Ron pay for each share? State any assumptions you make.

20. A Canadian quarter is made from nickel, copper, and steel. The quarter is $\frac{11}{500}$ nickel, $\frac{19}{500}$ copper, and $\frac{47}{50}$ steel.

- a) Predict the sum of the three fractions. Justify your prediction.
- b) Test your prediction by calculating the sum of the three fractions.
- c) How many times as great is the mass of the steel as the combined mass of the nickel and the copper?
- d) The mass of a Canadian quarter is 4.4 g. In a roll of 40 quarters, how much greater is the mass of copper than the mass of nickel?

Math Link: Wrap It Up!

Design a game that can be played with a partner or in a small group. The game must include

- calculations that involve at least two operations and both positive and negative rational numbers
- dice, coins, playing cards, or other materials to generate numbers

- a) Describe the rules of the game, including how the winner is decided.
- b) Give examples of the calculations that the game involves.
- c) Play the game with a partner or in a small group.
- d) Suggest alternative rules for the game. For example, you might suggest modifications to the game, such as including different operations.

