

M7 PLUS: Unit 2 - Rational Numbers STUDY GUIDE

Short Answer

1. Add. Estimate to check whether the answer is reasonable.

$$-9.267 + 14.5$$

2. Write the following fraction as a decimal.

$$\frac{2}{5}$$

Simplify the expression.

3. $\frac{2}{3}(-30m + 48)$

4. $\frac{1}{2}(-14m + 46)$

5. $-\frac{6}{9} - \frac{1}{5}$

6. $5.2(-2.2)$

7. $3\frac{1}{3} + \left(-5\frac{2}{6}\right)$

8. $-5.1 - (-4.8) + 3.9$

9. $2\frac{2}{6} - \left(-1\frac{1}{2}\right)$

10. $11\frac{1}{2} + \left(-7\frac{1}{8}\right)$

11. Evaluate $-x + (-5.3)$ for $x = -2.8$.

12. Rafael ate one fifth of a pizza and Donatello ate three eighths of it. What fraction of the pizza did they eat?

13. Divide. Estimate to check whether your answer is reasonable.

$$47.2 \div (8)$$

14. Write $\frac{1}{18}$, $\frac{3}{4}$, $-\frac{3}{5}$ in order from least to greatest.

15. **Simplify.** $-2.2(3.4x - 4.4)$

16. Evaluate the expression $n - \frac{4}{7}$ for $n = -1\frac{2}{3}$.

17. Six bags of Krunch-Max potato chips cost \$15.96. How much does one bag cost?

18. Divide, and then round to the nearest hundredth.

$$3.5 \div 0.37$$

19. Perform the following operation. Simplify if necessary.

$$\frac{1}{8} + \frac{2}{9}$$

20. Evaluate the expression $n + 1$ for $n = -1\frac{1}{4}$.

21. Jill measures some scrap boards in her garage to see if she has enough to make a border around her garden. She needs 10 meters total. The boards measure 2.75 meters, 3.2 meters, 1.65 meters, and 2.6 meters. Does Jill have enough?

22. Multiply. $0.9(-0.02)$

23. Mr. Romito is a bus driver for the Mansfield Coach Company. He drove the Maple Hills Senior Citizen Group on a 2-day motor trip through Upstate New York to view the autumn colors. On the first day, he drove 538.5 miles. On the second day, he logged 365.027. How many more miles did he drive the first day than the second?

24. Write $\frac{4}{7}$, $\frac{2}{3}$, $-\frac{2}{5}$ in order from least to greatest.

25. The stock market shows these daily changes.

Mon	Tues	Wed	Thurs	Fri
$-\frac{1}{4}$	$-\frac{3}{8}$	$\frac{1}{6}$	$-\frac{3}{4}$	$\frac{7}{12}$

What is the average for the week?

26. A candle was originally $5\frac{1}{2}$ inches tall. After burning awhile, it is now $2\frac{1}{3}$ inches. How much did it burn?

27. Multiply the following and simplify.

$$4\left(\frac{5}{10}\right)$$

28. Subtract. Estimate to check whether the answer is reasonable.

$$-9.6 - 6.246$$

29. Write the following fraction as a decimal.

$$\frac{4}{7}$$

30. Divide and simplify. $\frac{3}{16} \div \frac{9}{4}$

31. Write the decimal 0.322 as a fraction in simplest form.

32. Evaluate $-x + 0.7$ for $x = 8.3$.

33. Perform the following operation. Simplify if necessary.

$$\frac{-9}{10} + \frac{3}{8}$$

34. Divide. Estimate to check whether your answer is reasonable.
 $23.53 \div (-13)$

35. Write the decimal 0.178 as a fraction in simplest form.

M7 PLUS: Unit 2 - Rational Numbers STUDY GUIDE
Answer Section

SHORT ANSWER

1. 5.233
2. 0.4
3. $-20m + 32$
4. $-7m + 23$
5. $-\frac{13}{15}$
6. -11.44
7. -2
8. 3.6
9. $3\frac{5}{6}$
10. $4\frac{3}{8}$
11. -2.5
12. $\frac{23}{40}$
13. 5.9
14. $-\frac{3}{5}, \frac{1}{18}, \frac{3}{4}$
15. $-7.48x + 9.68$
16. $-2\frac{5}{21}$
17. \$2.66
18. 9.46
19. $\frac{25}{72}$
20. $-\frac{1}{4}$
21. Yes, 10.2 meters
22. -0.018
23. 173.473 miles
24. $-\frac{2}{5}, \frac{4}{7}, \frac{2}{3}$
25. $-\frac{1}{8}$
26. $3\frac{1}{6}$ inches
27. 2
28. -15.846
29. $0.\overline{571428}$

- 30.** $\frac{1}{12}$
- 31.** $\frac{161}{500}$
- 32.** -7.6
- 33.** $-\frac{21}{40}$
- 34.** -1.81
- 35.** $\frac{89}{500}$