Packet #2

e. The balance in a checking account is \$6. If a check is written for \$10, what integer represents the number of dollars in the account?

f. Evaluate $5 - (x + 4)$ when $x = -4$.

g. Evaluate $8 + (q + 1)$ when $q = -3$.

h. Evaluate $2 + (5 - m)$ when $m = 7$.

i. Complete the function table. Write an equation to represent the ordered pairs in the table, and then graph the equation.

x	y
−2	−1
−1	
0	1
1	
2	3

Written Practice

Distributed and Integrated

Represent Draw two parallel segments that are horizontal. Make the upper segment longer than the lower segment. Connect the endpoints of the segments to form a quadrilateral. What kind of quadrilateral did you draw?

"A pint's a pound the world around" means that a pint of water weighs about a pound. About how much does a gallon of water weigh?

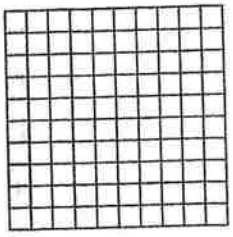
3. **Estimate** Estimate the sum of $7\frac{1}{5}$ and $3\frac{7}{8}$ by rounding both numbers to the nearest whole number before adding.

4. **Analyze** There are 43 people waiting in the first line and 27 people waiting in the second line. If some of the people in the first line move to the second line so that there are the same number of people in each line, then how many people will be in each line? Does your answer represent the mean, median, mode, or range of the data?

5. (72) Write these percents as fractions and as decimals:

a. 48% **b.** 80% **c.** 6%

6. (58) **Represent** Name the shaded part of this square as a decimal number, as a reduced fraction, and as a percent.



7. (62, 69) **Analyze** Write fractions equal to $\frac{1}{5}$ and $\frac{7}{8}$ that have denominators of 40. Then add the fractions. Remember to convert the answer to a mixed number.

8. (73) Reduce each fraction by dividing the terms of the fraction by their GCF:

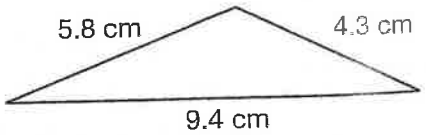
a. $\frac{12}{30}$ **b.** $\frac{8}{36}$ **c.** $\frac{12}{60}$

9. (91) Simplify:

a.
$$\begin{array}{r} 9.78 \\ +\ 5.52 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 28.79 \\ -\ 13.74 \\ \hline \end{array}$$

***10.** (94) What is a reasonable estimate of the perimeter of this scalene triangle?



11. (37, 60) In a recent year, the United States produced 53.3 million metric tons of wheat, which was 21.9 million metric tons more than France produced. That year, how many million metric tons of wheat did the United States and France produce altogether?

***12.** (93) 0.4 − 0.12

***13.** (93) 6.2 − 0.71

***14.** (95) Use algebraic addition to simplify each expression:

a. $-\left(\frac{4}{6}\right)+\left(-\frac{1}{6}\right)$

b. (0.4) − (−0.5)

c. (−7) − (+6)

d. (−2) − (−1) − (+3)

5. The high temperature of the day was 92°F. The low temperature of the day was 24°F lower than the high temperature. If $h - 24$ represents the low temperature of the day, where h is the high temperature, what is the value of the expression when $h = 92$?

16. 540×780

17. (62) $\frac{432}{6}$

18. (84) $\frac{864}{12}$

19. $5 - \left(1\frac{2}{3} + 1\frac{2}{3}\right)$

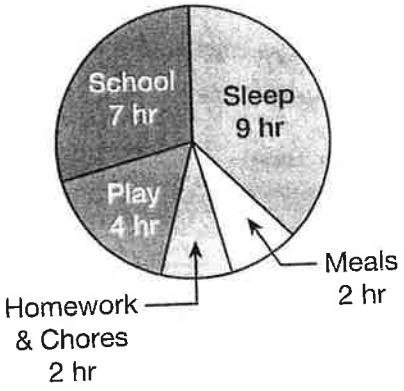
20. (63, 78) $\frac{5}{6} \times \left(3 \times \frac{2}{5}\right)$

21. $2 \div \frac{1}{3}$

22. (86) $\frac{1}{3} \div 2$

23. (69) $\frac{12}{50} = \frac{\square}{100}$

24. This graph shows how Darren spends his time each school day. Use the information in this graph to answer parts **a** and **b.**



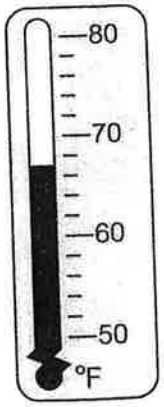
a. What is the total number of hours shown in the graph?

b. What fraction of the day does Darren spend sleeping?

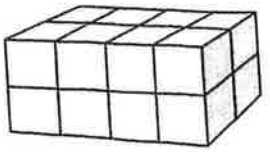
25. (93) Freddy poured 1.4 liters of juice from a full 2-liter container. How much juice was left in the container?

26. (96) **a.** What temperature is shown on the thermometer?

b. If the temperature shown on the thermometer is 19° lower than the high temperature for the day, then what was the high temperature?



27. (Inv. 9) What is the volume of this rectangular solid if each block is a one-inch cube?



28. (45) A fruit stand sells pineapples, strawberries, and kiwis. Purchases of fruit over a two-day period are recorded at right.

Fruit	Number Sold
Pineapples	23
Strawberries	16
Kiwis	41

Estimate the probability that someone who purchases a piece of fruit will buy a pineapple.

29. (56) Arrange these numbers in order from least to greatest:

$$1.0 \quad \frac{1}{10} \quad 0.001 \quad \frac{1}{100}$$

30. (Inv. 7) The table shows the number of Super Bowl wins for five professional football teams in the first 40 Super Bowls.

NFL Super Bowl

Team	Wins
Denver Broncos	2
Dallas Cowboys	5
Green Bay Packers	3
San Francisco 49ers	5
Tampa Bay Buccaneers	1

a. Choose an appropriate type of graph and then graph the data.

b. **Formulate** Write two questions that can be answered using your graph.

Subtract integers. (pages 408–413)

Example

Simplify: $^-8 - 6$

Solution

Change to an addition expression by adding the opposite.

$^-8 - 6 = {}^-8 + {}^-6 = {}^-14$

Subtract.

22. $^-5 - 6$
23. $7 - 4$
24. $^-8 - {}^-2$
25. $^-1 - {}^-1$
26. $6 - 11$
27. $^-9 - 3$
28. $0 - {}^-12$
29. $^-4 - {}^-1$

30. On Friday the high tide at Sunset Beach was 123 feet and the low tide was $^-86$ feet. What is the difference in feet between high and low tide?

Use strategies to solve problems. (pages 404–405, 414–415)

Example

Tickets to a planetarium sky show cost \$8. If the show earns \$376, how many tickets were sold?

Solution

Many problems can be solved in more than one way. You can solve problems in two ways to check your answers.

Method A

Write an equation.

Let n = the number of tickets sold.

$n \times 8 = 376$

$(n \times 8) \div 8 = 376 \div 8 = 47$

Method B

Guess and check.

Guess: 50 tickets
Check: $50 \times 8 = 400 \leftarrow$ too high

Guess: 45 tickets
Check: $45 \times 8 = 360 \leftarrow$ too low

Guess: 47 tickets
Check: $47 \times 8 = 376$

Solve.

31. Lava flows from 2 volcanoes meet and build up 144 inches of lava each year. If one lava flow contributes twice as much lava as the other flow, how much does each flow contribute?

32. A lava flow is traveling at a speed of 36 miles per hour. If the ocean is 99 miles from the volcano, how long will it take for the lava flow to reach the ocean?

33. A pyramid has 5 rows. The top row is made of 1 square. Each row has 2 more squares than the row above it. How many squares make up the bottom row?

Study Guide

NS 1.5, 2.1; MR 1.1

Chapter Study Guide

Language and Math

Complete. Use words from the list.

1. Whole numbers and their opposites are called ____.
2. The numbers 4 and $^-4$ are called ____.
3. An integer that is less than zero is a ____.
4. The opposite of $^-19$ is a ____.

Math Words

integers
negative integer
positive integer
opposite integers

Skills and Applications

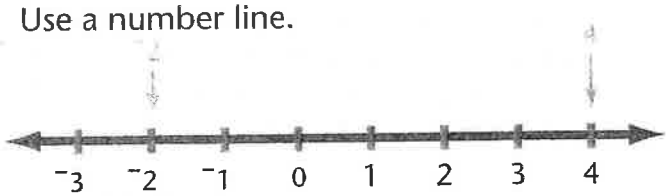
Compare and order integers. (pages 394–397)

Example

Compare $^-2$ and 4.

Solution

Use a number line.



Since 4 is to the right of $^-2$, $^-2 < 4$.

Compare. Write > or <.

5. 7 ● $^-8$
6. $^-4$ ● $^-3$
7. 0 ● 6
8. $^-2$ ● $^-6$

Order from least to greatest.

9. 2, $^-1$, 0
10. 3, $^-3$, $^-4$
11. $^-2$, $^-1$, $^-4$
12. 2, 1, $^-1$

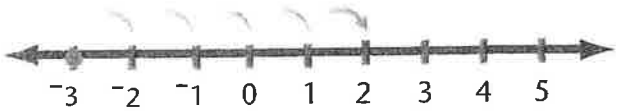
Add integers. (pages 398–403)

Example

Find: $^-3 + 5$

Solution

Start at $^-3$. Move 5 places to the right.



Add.

13. $6 + 8$
14. $^-3 + 2$
15. $^-9 + 12$
16. $^-8 + ^-2$
17. $6 + ^-4$
18. $^-5 + ^-4$
19. $7 + ^-11$
20. $^-15 + 15$
21. A cave explorer climbs down 6 feet below the surface into a cave. Then she climbs another 3 feet deeper. How far below the surface is she?