

Unit 1

Study Guide Review Answer Key

EXERCISES

Add. (Lessons 1.1, 1.2)

1. $-10 + (-5)$ -15

2. $9 + (-20)$ -11

3. $-13 + 32$ -19

Subtract. (Lesson 1.3)

4. $-12 - 5$ -17

5. $25 - (-4)$ 29

6. $-3 - (-40)$ 37

7. Antoine has \$13 in his checking account. He buys some school supplies and ends up with \$5 in his account. What was the overall change in Antoine's account? (Lesson 1.4)

-\$8

EXERCISES

Multiply or divide. (Lessons 2.1, 2.2)

1. $-9 \times (-5)$ 45 2. $0 \times (-10)$ 0 3. $12 \times (-4)$ -48

4. $-32 \div 8$ -4 5. $-9 \div (-1)$ 9 6. $-56 \div 8$ -7

Simplify. (Lesson 2.3)

7. $-14 \div 2 - 3$ -10 8. $8 + (-20) \times 3$ -52 9. $36 \div (-6) \times -15$ -21

10. Tony bought 3 packs of pencils for \$4 each and a pencil box for \$7. Mario bought 4 binders for \$6 each and used a coupon for \$6 off. Write and evaluate expressions to find who spent more money.

(Lesson 2.3)

Tony: $3 \times 4 + 7 = 19$; Mario: $4 \times 6 - 6 = 18$; Tony spent more money.

EXERCISES

Write each mixed number as a whole number or decimal. Classify each number according to the group(s) to which it belongs: rational numbers, integers, or whole numbers. (Lesson 3.1)

4; whole number,

1. $\frac{3}{4}$ 0.75; rational number

2. $\frac{8}{2}$ integer, rational number

3. $\frac{11}{3}$ 3.66..., rational number

4. $\frac{5}{2}$ 2.5, rational number

Find each sum or difference. (Lessons 3.2, 3.3)

5. $-5 + 9.5$ 4.5

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

7. $-0.5 + (-8.5)$ -9

8. $-3 - (-8)$ 5

9. $5.6 - (-3.1)$ 8.7

10. $3\frac{1}{2} - 2\frac{1}{4}$ $1\frac{1}{4}$

11. Jorge records his hours each day on a time sheet. Last week when he was ill, his time sheet was incomplete. If Jorge worked a total of 30.5 hours last week, how many hours are missing? Show your work. Then show that your answer is reasonable.

Mon	Tues	Wed	Thurs	Fri
8	$7\frac{1}{4}$	$8\frac{1}{2}$		

$$6\frac{3}{4} \text{ or } 6.75 \text{ hours; } 30.5 - \left(8 + 7\frac{1}{4} + 8\frac{1}{2}\right) = 30\frac{1}{2} - 23\frac{3}{4} = 6\frac{3}{4}$$

The amounts in the chart are about 8, 7, and 9, or 24 in all, which is 6.5 hours less than 30.5.

Find each product or quotient. (Lessons 3.4, 3.5)

12. $-9 \times (-5)$ 45 13. $0 \times (-7)$ 0 14. -8×8 -64

15. $\frac{-56}{8}$ -7 16. $\frac{-130}{-5}$ 26 17. $\frac{34.5}{1.5}$ 23

18. $-\frac{2}{5}\left(-\frac{1}{2}\right)\left(-\frac{5}{6}\right)$ $-\frac{1}{6}$ 19. $\left(\frac{1}{5}\right)\left(-\frac{5}{7}\right)\left(\frac{3}{4}\right)$ $-\frac{3}{28}$

20. Lei withdrew \$50 from her bank account every day for a week. What was the change in her account in that week?

$$-50 \times 7 = -350; -\$350$$

- 21.** Dan is cutting 4.75-foot lengths of twine from a 240-foot spool of twine. He needs to cut 42 lengths and says that 40.5 feet of twine will remain. Show that this is reasonable.

$-4.75(42)$ is about $-5(40) = -200$, and $240 - 200 = 40$.

- 22.** Jackson works as a veterinary technician and earns \$12.20 per hour.

- a.** Jackson normally works 40 hours a week. In a normal week, what is his total pay before taxes and other deductions?

$\$488$

- b.** Last week, Jackson was ill and missed some work. His total pay before deductions was \$372.10. Write and solve an equation to find the number of hours Jackson worked.

30.5 hours; $\$12.20x = \372.10

- 23.** When Jackson works more than 40 hours in a week, he earns 1.5 times his normal hourly rate for each of the extra hours. Jackson worked 43 hours one week. What was his total pay before deductions? Justify your answer.

$\$542.90$; $40(\$12.20) + 3(1.5(\$12.20)) = \$542.90$
