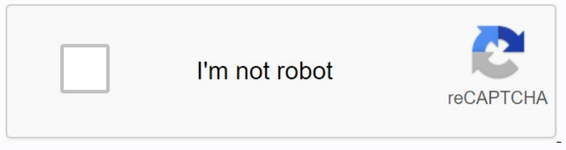
Glencoe algebra 1 workbook answer key pdf



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NAME _____ DATE _____ PERIOD ____

8-1 Practice

Monomials and Factoring

Find the factors of each number. Then classify each number as *prime* or *composite*.

1. 18 1, 2, 3, 6, 9, 18; composite
2. 37 1, 37; prime
3. 48 1, 2, 3, 4, 6, 8, 12, 16, 24, 48; composite
4. 116 1, 2, 4, 29, 58, 116; composite
5. 138 1, 2, 3, 6, 23, 46, 69, 138; composite
6. 211 1, 211; prime

Find the prime factorization of each integer.

7. 52 $2^2 \cdot 13$
8. -96 $-1 \cdot 2^5 \cdot 3$
9. 108 $2^2 \cdot 3^3$
10. 225 $3^2 \cdot 5^2$
11. 286 $2 \cdot 11 \cdot 13$
12. -384 $-1 \cdot 2^7 \cdot 3$

Factor each monomial completely.

13. $30d^5$ $2 \cdot 3 \cdot 5 \cdot d \cdot d \cdot d \cdot d \cdot d$
14. $-72mn$ $-1 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot m \cdot n$
15. $81b^2c^3$ $3 \cdot 3 \cdot 3 \cdot 3 \cdot b \cdot b \cdot c \cdot c \cdot c$
16. $145ab^3$ $5 \cdot 29 \cdot a \cdot b \cdot b \cdot b$
17. $168pq^2r$ $2 \cdot 2 \cdot 2 \cdot 3 \cdot 7 \cdot p \cdot q \cdot q \cdot r$
18. $-121x^2yz^2$ $-1 \cdot 11 \cdot 11 \cdot x \cdot x \cdot y \cdot z \cdot z$

Find the GCF of each set of monomials.

19. 18, 49 1
20. 18, 45, 63 9
21. 16, 24, 48 8
22. 12, 30, 114 6
23. 9, 27, 77 1
24. 24, 72, 108 12
25. $24fg^3$, $56f^2g$ $8fg$
26. $72r^3s^2$, $36rs^2$ $36rs^2$
27. $15a^2b$, $35ab^2$ $5ab$
28. $28m^3n^2$, $45pq^2$ 1
29. $40xy^2$, $56x^3y^2$, $124x^3y^3$ $4xy^2$
30. $88c^3d$, $40c^3d^2$, $32c^2d$ $8c^2d$

GEOMETRY For Exercises 31 and 32, use the following information.
The area of a rectangle is 84 square inches. Its length and width are both whole numbers.

31. What is the minimum perimeter of the rectangle? 38 in.
32. What is the maximum perimeter of the rectangle? 170 in.

RENOVATION For Exercises 33 and 34, use the following information.
Ms. Baxter wants to tile a wall to serve as a splashguard above a basin in the basement. She plans to use equal-sized tiles to cover an area that measures 48 inches by 36 inches.

33. What is the maximum-size square tile Ms. Baxter can use and not have to cut any of the tiles? 12-in. square
34. How many tiles of this size will she need? 12

Lesson 8-1

Name _____ Class _____ Date _____

1.3 Studying Life

Lesson Objectives

- List the characteristics of living things.
- Identify the central themes of biology.
- Explain how life can be studied at different levels.
- Discuss the importance of a universal system of measurement.

Lesson Summary

Characteristics of Living Things **Biology** is the study of life. Living things share these characteristics: They are made of cells and have a universal genetic code; they obtain and use materials and energy to grow and develop; they reproduce; they respond to signals in their environment (**stimuli**) and maintain a stable internal environment; they change over time.

Big Ideas in Biology The study of biology revolves around several interlocking big ideas:

- **Cellular basis of life.** Living things are made of cells.
- **Information and heredity.** Living things are based on a universal genetic code written in a molecule called **DNA**.
- **Matter and energy.** Life requires matter that provides raw material, nutrients, and energy. The combination of chemical reactions through which an organism builds up or breaks down materials is called **metabolism**.
- **Growth, development, and reproduction.** All living things reproduce. In **sexual reproduction**, cells from two parents unite to form the first cell of a new organism. In **asexual reproduction**, a single organism produces offspring identical to itself. Organisms grow and develop as they mature.
- **Homeostasis.** Living things maintain a relatively stable internal environment.
- **Evolution.** Taken as a group, living things evolve, linked to a common origin.
- **Structure and function.** Each major group of organisms has evolved structures that make particular functions possible.
- **Unity and diversity of life.** All living things are fundamentally similar at the molecular level.
- **Interdependence in nature.** All forms of life on Earth are connected into a **biosphere**—a living planet.
- **Science as a way of knowing.** Science is not a list of facts but "a way of knowing."

Fields of Biology Biology includes many overlapping fields that use different tools to study life. These include biotechnology, global ecology, and molecular biology.

Performing Biological Investigations Most scientists use the metric system as a way to share quantitative data. They are trained in safe laboratory procedures. To remain safe when you are doing investigations, the most important rule is to follow your teacher's instructions.

Algebra I Mini-Quiz 3.1-3.5 Name Answer key Period

Write the inequality shown by the graph.

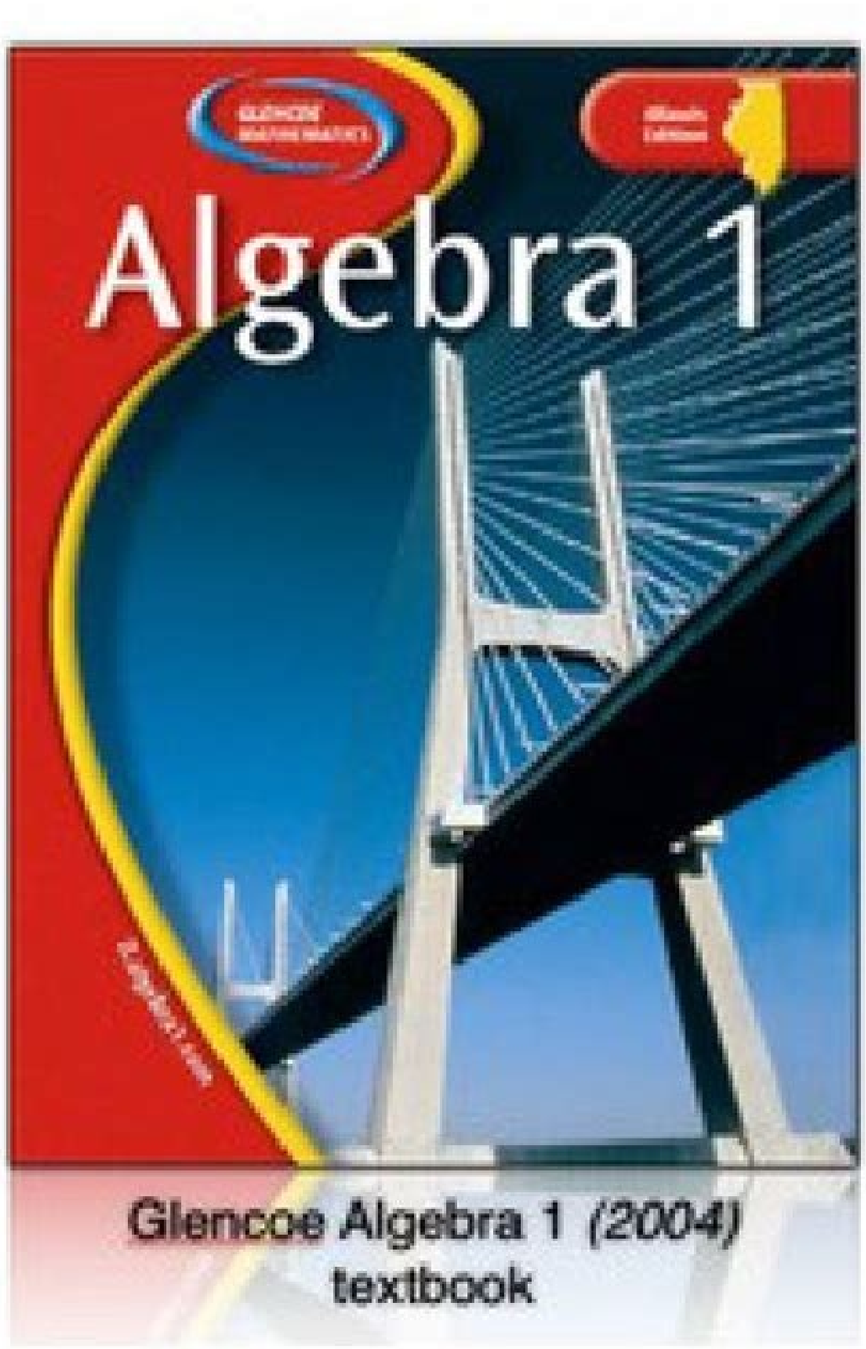
1. $x \geq -3$ (-3 Closed Right)

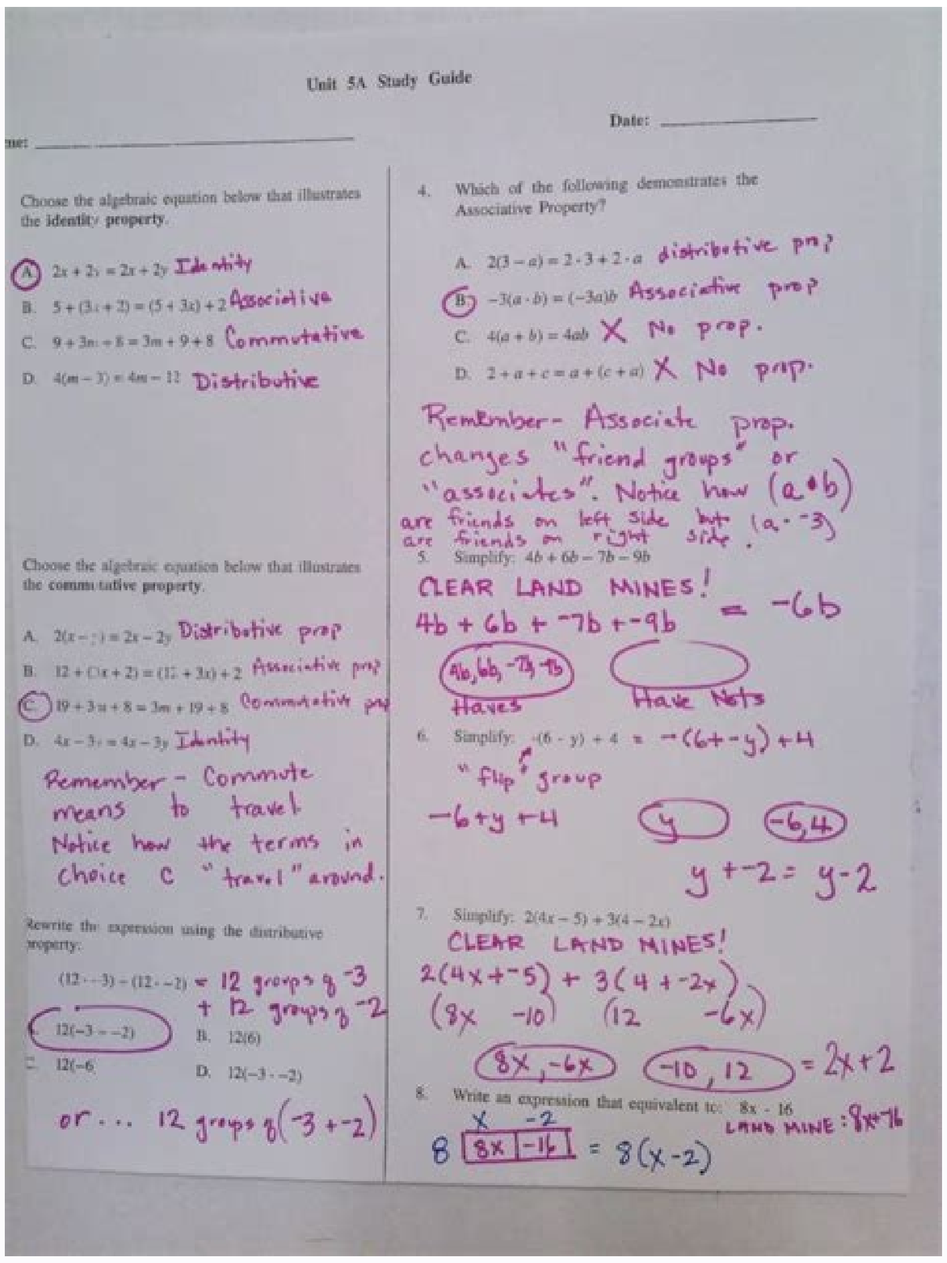
Solve. Show all work for credit.

2. $x + \frac{2}{7} \geq \frac{6}{7}$ → $x \geq \frac{4}{7}$
3. $\frac{-4z}{-4} \geq \frac{12}{-4}$ ÷ by neg change direction → $z \leq -3$
4. $\frac{p}{2} < 60 \cdot 2$ → $p < 120$
5. $-3y - 8 > -2$ → $\frac{-3y}{-3} > \frac{6}{-3}$ change direction → $y < -2$
6. $z + 7 + 4z \leq -3$ → $\frac{5z}{5} \leq \frac{-10}{5}$ → $z \leq -2$
7. $4(x+2) < 16$ → $4x + 8 < 16$ → $\frac{4x}{4} < \frac{8}{4}$ → $x < 2$
8. $5 \cdot \frac{7x+1}{5} \geq 10 \cdot 5$ → $7x + 1 \geq 50$ → $7x \geq 49$ → $x \geq 7$
9. $7x - 1 < 4x + 11$ → $3x < 12$ → $x < 4$
10. $2(k-1) > 5 + 3k$ → $2k - 2 > 5 + 3k$ → $-k > 7$ → $k < -7$

BONUS:
Solve the compound inequality and graph.
$3 < 3x - 1 \leq 11$ → $4 < 3x \leq 12$ → $2 < x \leq 4$

Part A	Answers
1)	$x \geq -3$
2)	$x > \frac{4}{7}$
3)	$z \leq -3$
4)	$p < 120$
5)	$y < -2$
6)	$z \leq -2$
7)	$x < 2$
8)	$x \geq 7$
9)	$x < 4$
10)	$k < -7$
Bonus Answer:	$2 < x \leq 4$
Bonus Graph:	





Unit 5A Study Guide

Date: _____

Choose the algebraic equation below that illustrates the **identity property**.

A. $2x + 2y = 2x + 2y$ Identity
B. $5 + (3x + 2) = (5 + 3x) + 2$ Associative
C. $9 + 3m + 8 = 3m + 9 + 8$ Commutative
D. $4(m - 3) = 4m - 12$ Distributive

Choose the algebraic equation below that illustrates the **commutative property**.

A. $2(x - y) = 2x - 2y$ Distributive prop
B. $12 + (3x + 2) = (12 + 3x) + 2$ Associative prop
C. $19 + 3m + 8 = 3m + 19 + 8$ Commutative prop
D. $4x - 3y = 4x - 3y$ Identity

Remember - Commute means to travel. Notice how the terms in choice C "travel" around.

Rewrite the expression using the distributive property:

$(12 \cdot -3) - (12 \cdot -2)$ = 12 groups of -3 + 12 groups of -2

A. $12(-3 - -2)$
B. $12(6)$
C. $12(-6$
D. $12(-3 \cdot -2)$

or ... 12 groups of $(-3 + -2)$

4. Which of the following demonstrates the Associative Property?

A. $2(3 - a) = 2 \cdot 3 + 2 \cdot a$ distributive prop
B. $-3(a \cdot b) = (-3a)b$ Associative prop
C. $4(a + b) = 4ab$ X No prop.
D. $2 + a + c = a + (c + a)$ X No prop.

Remember - Associate prop. changes "friend groups" or "associates". Notice how $(a \cdot b)$ are friends on left side but $(a \cdot -3)$ are friends on right side.

5. Simplify: $4b + 6b - 7b - 9b$

CLEAR LAND MINES!

$4b + 6b + -7b + -9b$ = $-6b$

4b, 6b, -7b, -9b — Haves; Have Nots

6. Simplify: $-(6 - y) + 4$ = $-(6 + -y) + 4$

"flip" group

$-6 + y + 4$

y; -6, 4

$y + -2 = y - 2$

7. Simplify: $2(4x - 5) + 3(4 - 2x)$

CLEAR LAND MINES!

$2(4x + -5) + 3(4 + -2x)$

$(8x \quad -10) \quad (12 \quad -6x)$

8x, -6x; -10, 12 = $2x + 2$

8. Write an expression that equivalent to: $8x - 16$

LAND MINE: $8x - 16$

x	-2
8x	-16

$8(x - 2)$