

**Teacher's Guide for
MindJogger
Videoquizzes**



Algebra 1

Includes:

- **MindJogger Videoquiz User Guide**
- **Teaching Strategies for Videoquizzes**
- **Questions and Answers**
- **Scoring Sheet**



**Glencoe
McGraw-Hill**

Glencoe/McGraw-Hill

A Division of The McGraw-Hill Companies



Copyright © by The McGraw-Hill Companies, Inc.
All rights reserved. Except as permitted under the
United States Copyright Act, no part of this publication
may be reproduced or distributed in any form by any
means or stored in a database or retrieval system
without prior written permission of the publisher.

Send all inquiries to:

Glencoe/McGraw-Hill
8787 Orion Place
Columbus, OH 43240-4027

ISBN: 0-07-830699-X
Part of ISBN: 0-07-829062-7

Printed in the United States of America
2 3 4 5 6 7 8 9 039 06 04 03

TABLE OF CONTENTS

To the Teacher	iv
Teaching Strategies	iv
Chapter Correlation	v
User Guide	vi
Answer Cards	vi
Scoring Sheet	vi
Questions and Answers	
Videoquiz 1	1
Videoquiz 2	4
Videoquiz 3	7
Videoquiz 4	9
Videoquiz 5	11
Videoquiz 6	14
Videoquiz 7	16
Videoquiz 8	19
Videoquiz 9	21
Videoquiz 10	23
Videoquiz 11	25
Videoquiz 12	27
Videoquiz 13	30
Videoquiz 14	33
Scoring Sheet	35
Answer Cards	36

TO THE TEACHER

The *Algebra 1* MindJogger Videoquizzes package contains three videotapes, a Teacher Guide, and answer cards. There is a videoquiz for each of the 14 chapters of *Algebra 1*. Included in the Teacher Guide are teaching strategies, a chapter correlation, a user guide, a copy of all the questions and answers in the *MindJogger Videoquizzes*, and a scoring sheet.

MindJogger Videoquizzes are designed to enhance student learning within the classroom. The convenience of this medium allows for individual and group learning.

TEACHING STRATEGIES

Algebra 1 MindJogger Videoquizzes can be used for reviewing chapter content material in preparation for chapter testing. Set in a game show context, these quizzes combine oral questioning, written questions that appear on the screen, and engaging visuals. By incorporating these modes of communication, the shows are especially helpful for oral and visual learners.

In addition to testing the acquisition of mathematics concepts, skills, and problem solving within the classroom setting, *MindJogger Videoquizzes* can serve other functions. For students who have been absent, the videoquizzes can be used for review of missed material. They may also be used as additional reinforcement of the major concepts and skills and can be an effective and enjoyable tool when preparing for semester and final exams.

CHAPTER CORRELATION

MindJogger Videoquizzes cover concepts in each chapter of *Algebra 1*.

- Videoquiz 1** Use after Chapter 1:
The Language of Algebra
- Videoquiz 2** Use after Chapter 2:
Real Numbers
- Videoquiz 3** Use after Chapter 3:
Solving Linear Equations
- Videoquiz 4** Use after Chapter 4:
Graphing Relations and Functions
- Videoquiz 5** Use after Chapter 5:
Analyzing Linear Equations
- Videoquiz 6** Use after Chapter 6:
Solving Linear Inequalities
- Videoquiz 7** Use after Chapter 7:
Solving Systems of Linear Equations and Inequalities
- Videoquiz 8** Use after Chapter 8:
Polynomials
- Videoquiz 9** Use after Chapter 9:
Factoring
- Videoquiz 10** Use after Chapter 10:
Quadratic and Exponential Functions
- Videoquiz 11** Use after Chapter 11:
Radical Expressions and Triangles
- Videoquiz 12** Use after Chapter 12:
Rational Expressions and Equations
- Videoquiz 13** Use after Chapter 13:
Statistics
- Videoquiz 14** Use after Chapter 14:
Probability

USER GUIDE

MindJogger Videoquizzes are presented in a game show format. Separate the students into cooperative groups or teams. Each team should be supplied with a set of answer cards and a copy of the scoring sheet. Have each team sit together and face the video screen. Each team should select its own scorekeeper or you may wish to select a scorekeeper for the entire classroom.

There are three rounds to each videoquiz, with each round a little more difficult than the previous one. During each round, a question is asked and a time limit set in which to answer each question. Pencil, paper, and calculator may be needed for some of the questions.

Round One covers mathematical concepts from the chapter. For this round, each team has 10 seconds in which to decide on an answer to each of five questions.

Round Two reviews mathematical skills in the chapter. In this round, each team has 15 seconds to answer each of four questions.

Round Three tests problem-solving abilities and critical-thinking skills. In this round, each team has 20 seconds to decide on an answer to each of four questions.

After each question is asked, a time thermometer will appear on the right side of the videoscreen, indicating the amount of time left to answer the question. If more time is needed at any point during the videoquizzes, simply pause the tape. At the end of each round, time is allotted for each team to total its score. A final score is totaled at the end of Round Three, indicating a winner for that particular segment of *MindJogger Videoquizzes*.

ANSWER CARDS

Each team should be supplied with four answer cards labeled, A, B, C, and D. These cards are included in the *MindJogger Videoquizzes* package.

SCORING SHEET

Each team should be supplied with a copy of the scoring sheet. The scoring sheet is included on the last page of this booklet.

MINDJOGGER VIDEOQUIZ 1

CHAPTER 1 • The Language of Algebra

Round 1

Question 1

Which verbal expression represents $10 + x^2$?

- A. ten more than x squared
- B. the product of x squared and ten
- C. ten more than the quotient of two and x
- D. ten increased by two times x

The answer is A.

Question 2

Which property does the statement $\frac{2}{3} \cdot \frac{3}{2} = 1$ illustrate?

- A. Multiplicative Identity Property
- B. Reflexive Property of Equality
- C. Multiplicative Inverse Property
- D. Substitution Property of Equality

The answer is C.

Question 3

Which property is illustrated by $3s + 2t + 5 = 2t + 3s + 5$?

- A. Associative Property of Addition
- B. Commutative Property of Addition
- C. Substitution Property
- D. Distributive Property

The answer is B.

Question 4

The part of the conditional statement that immediately follows the word *if* is called the _____.

- A. conclusion
- B. counterexample
- C. range
- D. hypothesis

The answer is D.

Question 5

What is the last step when solving equations by order of operations?

- A. evaluate grouping symbols
- B. evaluate powers
- C. do addition and/or subtraction
- D. do multiplication and/or division

The answer is C.

Round 2

Question 1

Solve $y = \frac{4^2(13 - 3)}{6 + 2^2}$.

- A. 16
- B. 10
- C. 20
- D. 25

The answer is A.

MINDJOGGER VIDEOQUIZ 1

CHAPTER 1 • The Language of Algebra (con't)

Question 2

Find the solution set for $4a - 2 \geq 30$ if the replacement set is {6, 7, 8, 9}.

- A. {6, 7, 8, 9}
- B. {6, 7}
- C. {9}
- D. {8, 9}

The answer is D.

Question 3

Simplify $3(2a + 5)$.

- A. $5a + 15$
- B. $6a + 15$
- C. $5a + 8$
- D. $6a + 5$

The answer is B.

Question 4

Find the counterexample for the conditional statement:

If two numbers are multiplied, then the product is always greater than either factor.

- A. 3 and 2
- B. 1 and 10
- C. 5 and 6
- D. 4 and 11

The answer is B.

Round 3

Question 1

Suppose 55 corsages are sold at \$7 each. Each corsage costs \$3 to make. Which expression could be used to find the profit after expenses?

- A. $55(\$7 - \$3)$
- B. $55(\$7 + \$3)$
- C. $55(\$7) - \3
- D. $55(\$3) + \7

The answer is A.

Question 2

Which situation is represented by the graph?

- A. a ball bouncing up and down
- B. a rocket ship taking off
- C. a car starting, accelerating, maintaining its speed, and stopping
- D. an elevator moving from the top to the ground floor

The answer is C.

MINDJOGGER VIDEOQUIZ 1

CHAPTER 1 • The Language of Algebra (con't)

Question 3

One gram of fat contains 9 Calories. A serving of potato chips contains 11 grams of fat. If you eat 2 servings of chips, how many Calories from fat have you consumed?

- A. 18 Calories
- B. 198 Calories
- C. 22 Calories
- D. 99 Calories

The answer is B.

Question 4

The graph shows that for every two CD's purchased at \$12 each you get one free. What is the cost of buying 6 CD's?

- A. \$60
- B. \$36
- C. \$72
- D. \$48

The answer is D.

MINDJOGGER VIDEOQUIZ 2

CHAPTER 2 • Real Numbers

Round 1

Question 1

Name the coordinates of the points graphed on the number line.

- A. {..., -4, -3, -2, -1, 0, 1, 2, 3, 4, ...}
- B. {0, 3, 4}
- C. {..., -4, -3, -2, -1, 1, 2}
- D. {-4, -3, -2, -1, 1, 2}

The answer is D.

Question 2

Refer to the graph. In how many games did the team score more than 60 points?

- A. 10
- B. 7
- C. 5
- D. 4

The answer is C.

Question 3

Which term is a ratio of the number of favorable outcomes for an event to the number of possible outcomes of the event?

- A. odds
- B. probability
- C. sample space
- D. random outcome

The answer is B.

Question 4

The quotient of two numbers having different signs is _____.

- A. positive
- B. the sign of the larger number
- C. negative
- D. the sign of the difference

The answer is C.

Question 5

To which set of real numbers does $-\sqrt{145}$ belong?

- A. whole numbers
- B. irrational numbers
- C. natural numbers
- D. rational numbers

The answer is B.

Round 2

Question 1

Find the sum of -45 and 21.

- A. -66
- B. 66
- C. -24
- D. 24

The answer is C.

MINDJOGGER VIDEOQUIZ 2

CHAPTER 2 • Real Numbers (con't)

Question 2

Identify the least number, the greatest number, and the number that occurs most frequently in the stem-and-leaf plot shown.

Stem	Leaf	
2	0 2 3 3 6	
3	1 2 2 2 7	
4	3 4 6	43 = 43

- A. 2, 73, 23
- B. 0, 6, 2
- C. 20, 46, 23
- D. 20, 46, 32

The answer is D.

Question 3

Evaluate $ac - 5b$ if

$$a = \frac{3}{4}, b = \frac{1}{2}, \text{ and } c = 7.$$

- A. $\frac{11}{4}$
- B. 4
- C. $\frac{31}{4}$
- D. $-\frac{1}{4}$

The answer is A.

Question 4

Simplify $\frac{-28x + 44y}{-4}$.

- A. $-32x + 40y$
- B. $-28x - 11y$
- C. $7x + 11y$
- D. $7x - 11y$

The answer is D.

Round 3

Question 1

Arrange the numbers 8.607, 8.701, 8.769, 8.498 in order from least to greatest.

- A. 8.769, 8.701, 8.607, 8.498
- B. 8.498, 8.607, 8.701, 8.769
- C. 8.607, 8.498, 8.701, 8.769
- D. 8.498, 8.607, 8.769, 8.701

The answer is B.

Question 2

During the first hour of a rummage sale, Mrs. White sold items that cost \$2.00, \$0.75, \$10.50, and \$5.80 and purchased items that cost \$0.25, \$15.00, and \$2.50. How much profit or debt did she accumulate?

- A. She is in debt \$36.80.
- B. She is in debt \$1.30.
- C. She has a profit of \$36.80.
- D. She has a profit of \$1.30.

The answer is D.

MINDJOGGER VIDEOQUIZ 2

CHAPTER 2 • Real Numbers (con't)

Question 3

The formula to find the length of the hypotenuse c of a right triangle is $c = \sqrt{a^2 + b^2}$. If the side lengths are $a = 7$ and $b = 11$, find the length of the hypotenuse to the nearest whole number.

- A. 18 units
- B. 4 units
- C. 13 units
- D. 14 units

The answer is C.

Question 4

Two dice are rolled. What is the probability that a sum of 5 or less is rolled?

- A. $\frac{1}{6}$
- B. $\frac{2}{3}$
- C. $\frac{5}{12}$
- D. $\frac{5}{18}$

The answer is D.

MINDJOGGER VIDEOQUIZ 3

CHAPTER 3 • Solving Linear Equations

Round 1

Question 1

Which equation represents the sentence *Twice a number decreased by four is eighteen*?

- A. $2x - 4 = 18$
- B. $2x(4) = 18$
- C. $2x \div 4 = 18$
- D. $2x - 4x = 18$

The answer is A.

Question 2

When you find the cross products of two ratios, you are said to be _____.

- A. exchanging the products of both sides
- B. determining the square root of each side
- C. cross-multiplying
- D. adding the opposite to each side

The answer is C.

Question 3

Which equations are equivalent equations?

- A. $a - 9 = 14$ and $g + 9 = 33$
- B. $m + 4 = -5$ and $y + 1 = -8$
- C. $18 + t = 22$ and $20 - x = -24$
- D. $t - 4 = -9$ and $p + 6 = 11$

The answer is B.

Question 4

Which statement illustrates the Multiplication Property of Equality?

- A. If $7 = 7$, then $7 \times (-3) = 7 \times (-3)$.
- B. If $7 = 7$, then $7 - 2 = 7 - 2$.
- C. If $7 = 7$, then $7 + 3 = 7 + 3$.
- D. If $7 = 7$, then $\frac{7}{-2} = \frac{7}{-2}$.

The answer is A.

Question 5

Which group of expressions represents consecutive even integers if $x = 4$?

- A. $x, x + 2, x + 6$
- B. $x, x + 2, x + 4$
- C. $x - 2, x - 4, x + 4$
- D. $x, x - 1, x - 2$

The answer is B.

Round 2

Question 1

Find the solution of $43 + w = -13$.

- A. 30
- B. -30
- C. 46
- D. -56

The answer is D.

MINDJOGGER VIDEOQUIZ 3

CHAPTER 3 • Solving Linear Equations (con't)

Question 2

Solve $8g - 7h = 5$ for g .

A. $g = -3 + 7h$

B. $g = 5 - \frac{7}{8}h$

C. $g = \frac{5+7h}{8}$

D. $g = \frac{7h}{8} - 5$

The answer is C.

Question 3

Find the solution of

$$4n - 8 = 8(16 + n).$$

A. -30

B. -34

C. 34

D. 30

The answer is B.

Question 4

What is the solution of the

proportion $\frac{0.8}{2.5} = \frac{k}{12.5}$?

A. 25

B. 7.5

C. 6

D. 4

The answer is D.

Round 3

Question 1

Four is subtracted from a number and then the difference is multiplied by six. The result is 72. What is the number?

A. 90

B. 8

C. 16

D. 42

The answer is C.

Question 2

Amani wants to buy a video that sells for \$29.99. If the sales tax is 5.75%, what is the cost of the video?

A. \$25.49

B. \$31.71

C. \$33.02

D. \$30.72

The answer is B.

Question 3

Alex and Kristen leave their house at the same time. Alex rides his bike at 12 mph due west, and Kristen drives her car at 38 mph due east. In how many hours will they be 60 miles apart?

A. 1.2 h

B. 0.83 h

C. 2.31 h

D. 0.13 h

The answer is A.

Question 4

The area of a triangle is given by $A = \frac{1}{2}bh$ where b is the base and h is the height. Find the base of a triangle with a height 13 meters and an area of 78 square meters.

A. 507 m

B. 12 m

C. 26 m

D. 52 m

The answer is B.

MINDJOGGER VIDEOQUIZ 4

CHAPTER 4 • Graphing Relations and Functions

Round 1

Question 1

Which ordered pair represents point J shown on the coordinate plane?

A. (3, 2)

B. (-3, -2)

C. (3, -2)

D. (-3, 2)

The answer is B.

Question 2

The transformation that changes the size of a figure is called a _____.

A. dilation

B. reflection

C. translation

D. rotation

The answer is A.

Question 3

Which equation is an example of an equation in two variables?

A. $2m + 2m = 5$

B. $2m = 10$

C. $m = 0.5k$

D. $m = 4(2m)$

The answer is C.

Question 4

Which relation represents a function?

A. $\{(-3, 2), (-3, 5), (-3, 8)\}$

B. (graph)

C. $\{(0, 7), (3, 2), (-1, 7)\}$

D. (graph)

The answer is C.

Question 5

Which equation is a linear equation?

A. $x^2 + y^2 = 25$

B. $y = 7 + \frac{1}{x}$

C. $x - y^2 = 15$

D. $8 - 4y = -5x$

The answer is D.

Round 2

Question 1

Solve $3x + y = 2$ if the domain is $\{-3, 1, 4\}$.

A. $\{11, -1, -10\}$

B. $\{-7, 5, 14\}$

C. $\{-3, 1, 4\}$

D. $\{(-3, 11), (1, -1), (4, -10)\}$

The answer is A.

Question 2

Triangle RST has vertices $R(-1, 2)$, $S(3, 4)$ and $T(2, 1)$. Find the coordinates of $\triangle R'S'T'$ if $\triangle RST$ is reflected over the x -axis.

A. $R'(1, 2)$, $S'(-3, 4)$, $T'(-2, 1)$

B. $R'(1, -2)$, $S'(-3, -4)$, $T'(-2, -1)$

C. $R'(-1, -2)$, $S'(3, -4)$, $T'(2, -1)$

D. $R'(-1, 2)$, $S'(3, -4)$, $T'(2, -1)$

The answer is C.

MINDJOGGER VIDEOQUIZ 4

CHAPTER 4 • Graphing Relations and Functions (con't)

Question 3

Which relation is the inverse of

- {(-2, 3), (0, -1), (5, 4)}?
A. {(2, -3), (0, 1), (-5, -4)}
B. {(3, -2), (-1, 0), (4, 5)}
C. {(5, 4), (0, -1), (-2, 3)}
D. {(-3, 2), (1, 0), (-4, -5)}

The answer is B.

Question 4

Write an equation in function notation for the relation graphed.

- A. $f(x) = 2x$
B. $f(x) = 2x + 1$
C. $f(x) = \frac{1}{2}x + 1$
D. $f(x) = -2x + 1$

The answer is B.

Round 3

Question 1

If vertex M is located on a coordinate system at $(-10, -15)$, what are the coordinates of vertex N ?

- A. $(-4, 5)$
B. $(10, 8)$
C. $(12, -7)$
D. $(14, -5)$

The answer is C.

Question 2

Refer to the table. How much should a 5-topping pizza cost if the additional charge for each topping is the same?

Toppings	Cost
2	\$ 8.90
3	\$ 10.15
4	\$ 11.40
5	?

- A. \$13.90
B. \$12.30
C. \$11.85
D. \$12.65

The answer is D.

Question 3

The equation $C(x) = 12.95 + 0.78x$ represents the cost of a charm necklace, where x is the number of charms on the necklace. Find the price of a necklace that has 8 charms.

- A. \$ 6.24
B. \$13.73
C. \$19.19
D. \$20.75

The answer is C.

Question 4

Which circle represents the 21" circle in the pattern shown?

- A. (art)
B. (art)
C. (art)
D. (art)

The answer is C.

MINDJOGGER VIDEOQUIZ 5

CHAPTER 5 • Analyzing Linear Equations

Round 1

Question 1

In the equation $y = kx$, where $k \neq 0$, what is k called?

- A. constant of variation
B. y-intercept
C. direct variation
D. x-intercept

The answer is A.

Question 2

When using a linear equation to predict values that are inside the range of the data, you are using _____.

- A. linear extrapolation
B. positive correlation
C. linear interpolation
D. negative correlation

The answer is C.

Question 3

Which statement regarding the scatter plot shown is true?

- A. The graph shows a negative correlation.
B. x and y are independent.
C. The graph shows no correlation.
D. The graph shows a positive correlation.

The answer is D.

Question 4

What is the slope of a line that is perpendicular to the graph of $y = \frac{3}{5}x - 5$?

- A. $\frac{1}{5}$
B. $-\frac{5}{3}$
C. $\frac{3}{5}$
D. $\frac{5}{3}$

The answer is B.

Question 5

Identify the slope and y-intercept of the graph of $y = \frac{3}{2}x - 2$.

- A. 3, -4
B. $\frac{3}{2}$, -2
C. $-\frac{3}{2}$, 2
D. $\frac{2}{3}$, $\frac{4}{3}$

The answer is B.

Round 2

Question 1

Find the value of r so that the line through $(-3, r)$ and $(7, 3)$ has a slope of $\frac{4}{5}$.

- A. -9.5
B. -5
C. -6.6
D. -12

The answer is B.

MINDJOGGER VIDEOQUIZ 5

CHAPTER 5 • Analyzing Linear Equations (con't)

Question 2

Write the point-slope form of an equation for a line that passes through $(-6, -2)$ and $(6, 7)$.

A. $y - 7 = \frac{3}{4}(x - 6)$

B. $y - 2 = \frac{3}{4}(x - 6)$

C. $y + 2 = \frac{3}{4}(x - 6)$

D. $y - 7 = \frac{4}{3}(x - 6)$

The answer is A.

Question 3

Write an equation in slope-intercept form of a line that passes through $(4, 1)$ and $(2, -3)$.

A. $y = \frac{2}{3}x + 9$

B. $y = -2x - 4$

C. $y = \frac{1}{2}x - 4$

D. $y = 2x - 7$

The answer is D.

Question 4

If y varies directly as x , and $y = 18$ when $x = 12$, which direct variation equation relates x and y ?

A. $y = 6x$

B. $x = \frac{3}{2}y$

C. $y = \frac{3}{2}x$

D. $x = 6y$

The answer is C.

Round 3

Question 1

Which sentence describes the graph of the equations below?

$$x + 3y = 15$$

$$3x - y = -2$$

A. The lines are parallel.

B. The lines are neither parallel nor perpendicular.

C. The lines are perpendicular.

D. They are the same line.

The answer is C.

Question 2

Find the pitch, or slope, of the roof shown.

A. $\frac{2}{5}$

B. $\frac{1}{5}$

C. $\frac{3}{8}$

D. $\frac{5}{2}$

The answer is A.

MINDJOGGER VIDEOQUIZ 5

CHAPTER 5 • Analyzing Linear Equations (con't)

Question 3

The cost of renting a boat is a daily rate plus \$8 per hour. Marcus rents a boat for 4 hours and pays a total of \$52. Which linear equation represents the total cost C of renting the boat?

A. $C = 6.5h + 26$

B. $C = 8h + 20$

C. $C = 4h + 36$

D. $C = 13h$

The answer is B.

Question 4

Parallelogram $ABCD$ is shown. Write the point-slope form of the line containing \overline{BC} .

A. $y - 6 = -3(x - 2)$

B. $y + 6 = 3(x + 2)$

C. $y + 2 = \frac{1}{3}(x + 6)$

D. $y - 2 = 3(x - 6)$

The answer is D.

MINDJOGGER VIDEOQUIZ 6

CHAPTER 6 • Solving Linear Inequalities

Round 1

Question 1

Which symbol is needed to show that $4x$ is no more than twice a number?

- A. $>$
- B. \leq
- C. \geq
- D. $<$

The answer is B.

Question 2

Which statement is false?

- A. If $2w \leq 14$, then $w \leq 7$.
- B. If $-5x > -25$, then $x < 5$.
- C. If $-4t < 32$, then $t < -8$.
- D. If $6y \geq -12$, then $y \geq -2$.

The answer is C.

Question 3

Which sentence best represents a *union* of the graphs of two inequalities?

- A. $y > -7$ and $y < -3$
- B. If $y \geq 7$, then $y > 7$.
- C. $y < 6$ or $y \geq 7$
- D. $\{t \mid t < 6\}$

The answer is C.

Question 4

Which ordered pair is a solution of the inequality graphed?

- A. (1, -3)
- B. (-3, -1)
- C. (2, 4)
- D. (-2, 4)

The answer is A.

Question 5

Which absolute value inequality represents *The distance between x and 6 is greater than 2 units?*

- A. $|x - 2| \geq 6$
- B. $|x - 6| < 2$
- C. $|x - 2| \leq 6$
- D. $|x - 6| > 2$

The answer is D.

Round 2

Question 1

Which inequality corresponds to the graph shown?

- A. $x + 5 \geq 4$
- B. $4 - x > -1$
- C. $8 + x \leq 7$
- D. $9 - x \geq 8$

The answer is A.

Question 2

Find the graph of the solution set of $x \geq -3$ and $x < 1$?

- A. (number line)
- B. (number line)
- C. (number line)
- D. (number line)

The answer is C.

Question 3

Solve $|5y - 6| > 14$.

- A. $\{y \mid y > 4\}$
- B. $\{y \mid y \leq -\frac{8}{5} \text{ or } y \geq 4\}$
- C. $\{y \mid y < -4 \text{ or } y > 4\}$
- D. $\{y \mid y < -\frac{8}{5} \text{ or } y > 4\}$

The answer is D.

MINDJOGGER VIDEOQUIZ 6

CHAPTER 6 • Solving Linear Inequalities (con't)

Question 4

Solve $\frac{2a+9}{5} \leq a$.

- A. $\{a \mid a \leq 18\}$
- B. $\{a \mid a \geq 3\}$
- C. $\{a \mid a \leq -3\}$
- D. $\{a \mid a \geq -13\}$

The answer is B.

Round 3

Question 1

Twice a number minus 3 is no more than 5 or no less than 11.

Find the solution.

- A. $\{x \mid x > 4 \text{ or } x < 7\}$
- B. $\{x \mid x \leq 4 \text{ or } x \geq 7\}$
- C. $\{x \mid x \leq 4 \text{ or } x \geq 4\}$
- D. $\{x \mid x \geq 4 \text{ or } x \leq 7\}$

The answer is B.

Question 2

Tony has \$21 to buy a gift. The sales tax is $6\frac{3}{4}\%$. How much can he spend on the gift?

- A. \$19.67 or less
- B. \$20.60 or less
- C. \$12.53 or less
- D. \$20.86 or less

The answer is A.

Question 3

Olivia must earn a B or above in Algebra to qualify for lower car insurance rates. Her first two test grades are 81 and 79. If a score of 84 - 88 is a B, what score must she earn on the third test so that she can qualify for lower rates?

- A. 92 or above
- B. 98 or above
- C. 95 or above
- D. 94 or above

The answer is A.

Question 4

Amanda has a \$75 gift card. She plans to buy CDs and DVDs. Which inequality can be used to find the number of CDs and DVDs she can buy with the gift card?

Media Store	
CD	\$13
DVD	\$19
Videos	\$7

- A. $13x + 7y > 75$
- B. $19x - 13y \leq 75$
- C. $13x + 19y \leq 75$
- D. $13x + 19y \geq 75$

The answer is C.

MINDJOGGER VIDEOQUIZ 7

CHAPTER 7 • Solving Systems of Linear Equations and Inequalities

Round 1

Question 1

Which statement describes the system of equations shown?

- A. inconsistent
- B. consistent and dependent
- C. consistent and independent
- D. none of the above

The answer is C.

Question 2

Determine the best method to solve the system of equations shown.

$$2x + 3y = 21$$

$$x = 2y$$

- A. substitution
- B. elimination using subtraction
- C. graphing
- D. elimination using multiplication

The answer is A.

Question 3

How many solutions can a system of linear equations have?

- A. one
- B. none
- C. infinitely many
- D. all of the above

The answer is D.

Question 4

Which is the best method to use to solve the system of equations shown?

$$4x + 2y = -10$$

$$5x - 2y = 28$$

- A. graphing
- B. substitution
- C. elimination using addition
- D. elimination using subtraction

The answer is C.

Question 5

Which ordered pair represents a solution to the system of inequalities graphed?

- A. (0, -2)
- B. (3, 2)
- C. (-2, -3)
- D. (1, 4)

The answer is B.

Round 2

Question 1

Solve the system of equations shown using elimination.

$$x + 2y = 14$$

$$x - 3y = -11$$

- A. (6, 4)
- B. (8, 1)
- C. (4, 5)
- D. (1, 7)

The answer is C.

MINDJOGGER VIDEOQUIZ 7

CHAPTER 7 • Solving Systems of Linear Equations and Inequalities (con't)

Question 2

Find the solution of the system of equations shown by graphing.

$$y = \frac{1}{2}x$$

$$-2x + y = -3$$

- A. (2, 1)
- B. (3, 1)
- C. no solution
- D. infinitely many solutions

The answer is A.

Question 3

Use elimination to solve the system of equations shown.

$$t - 2s = 7$$

$$3t - 5s = 15$$

- A. no solution
- B. (5, -1)
- C. (1, 3)
- D. (-6, -5)

The answer is D.

Question 4

Which system of inequalities is represented by the graph?

- A. $y = x$
 $y = -x + 1$
- B. $y \leq x$
 $y > -x + 1$
- C. $y \geq x$
 $y < -x + 1$
- D. $y > x$
 $y < -x + 1$

The answer is C.

Round 3

Question 1

The width of a rectangle is 2 inches less than its length. The perimeter of the rectangle is 56 inches. Which system of equations can be used to find the width w and length l of the rectangle?

- A. $w - 2 = l$
 $lw = 56$
- B. $w + l = 2$
 $2l + 2w = 56$
- C. $w = l - 2$
 $l + 2w = 56$
- D. $w = l - 2$
 $2l + 2w = 56$

The answer is D.

Question 2

A barge travels 36 miles upstream in 4 hours. The return trip takes only 3 hours. Find the rate of the barge in still water.

- A. 10.5 mph
- B. 8.5 mph
- C. 15 mph
- D. 12.5 mph

The answer is A.

MINDJOGGER VIDEOQUIZ 7

CHAPTER 7 • Solving Systems of Linear Equations and Inequalities (con't)

Question 3

In a Spanish club, the number of girls plus the number of boys is 24. Three times the number of girls minus the number of boys is 8. How many girls are in the club?

- A. 12
- B. 16
- C. 4
- D. 8

The answer is D.

Question 4

Student tickets for a school play sell for \$3 and adult tickets sell for \$7. A total of 450 tickets have been sold. A total of \$2670 has been raised. How many student and adult tickets were sold?

- A. 110 student, 340 adult
- B. 120 student, 330 adult
- C. 210 student, 240 adult
- D. 330 student, 120 adult

The answer is B.

MINDJOGGER VIDEOQUIZ 8

CHAPTER 8 • Polynomials

Round 1

Question 1

Which expression is a monomial?

- A. $\frac{4x}{3y}$
- B. $\frac{1}{2}mn^3p$
- C. $51 - 2x$
- D. $\frac{5}{a}$

The answer is B.

Question 2

Which notation represents 0.00429 written in scientific notation?

- A. 4.29×10^3
- B. 4.29×10^{-3}
- C. 4.29×10^4
- D. 4.29×10^{-4}

The answer is B.

Question 3

Find the degree of $4x^6y - 3x^5y + 6x^3y^5$.

- A. 6
- B. 7
- C. 8
- D. 21

The answer is C.

Question 4

What property is used to multiply two binomials?

- A. Associative Property
- B. Commutative Property
- C. Distributive Property
- D. Product of Powers

The answer is C.

Question 5

What is the value of any nonzero number raised to the zero power?

- A. 1
- B. 0
- C. that number
- D. 2

The answer is A.

Round 2

Question 1

Simplify $4q(6q^2 - 5q + 3)$.

- A. $10q^3 - 32q^2 + 7q$
- B. $10q^3 - 20q^2 + 7q$
- C. $24q^2 - 20q - 12$
- D. $24q^3 - 20q^2 + 12q$

The answer is D.

Question 2

What is the product of $(2t + 3)$ and $(2t - 3)$?

- A. $4t^2 - 6t - 9$
- B. $4t^2 - 9$
- C. $4t - 6$
- D. $4t^2 - 12t - 9$

The answer is B.

Question 3

Express $\frac{4s^3t^{-3}}{6s^{-1}t}$ in simplest form.

- A. $\frac{4s^3t^4}{3}$
- B. $\frac{4s^4}{6t^{-4}}$
- C. $\frac{2s^4}{3t^4}$
- D. $\frac{2s^3}{3t^4}$

The answer is C.

MINDJOGGER VIDEOQUIZ 8

CHAPTER 8 • Polynomials (con't)

Question 4

Find $(4x^2 + 10x^4 + 3x) - (7x + 6x^2)$.

- A. $10x^2 + 10x^4 - 4x$
- B. $2x^2 + 10x^4 - 10x$
- C. $-2x^2 + 10x^4 - 4x$
- D. $-2x^2 + 10x^4 - 10x$

The answer is C.

Round 3

Question 1

Suppose 3,220,000 doses of mouthwash are produced and each dose can kill 2 million germs. Which expression represents the total number of germs that can be killed by the mouthwash produced?

- A. 6.44×10^6
- B. 6.44×10^{12}
- C. 6.44×10^{36}
- D. 6,440,000

The answer is B.

Question 2

What is the area of a square having sides that measure $2x + 5$ units?

- A. $4x^2 - 25$ units²
- B. $4x + 10$ units²
- C. $4x^2 + 20x + 25$ units²
- D. $8x + 20$ units²

The answer is C.

Question 3

Joe has 50 feet of fencing to enclose a rectangular garden. The length is 3 feet more than the width. Find the dimensions of the garden.

- A. 10 ft by 5 ft
- B. $12\frac{1}{2}$ ft by 4 ft
- C. 14 ft by 11 ft
- D. 40 ft by 43 ft

The answer is C.

Question 4

Find the area of the triangle shown.

- A. $4x^2 + 7x - 2$
- B. $8x^2 + 14x - 4$
- C. $3x^2 - 14x - 2$
- D. $4x^2 + 7x - 4$

The answer is A.

MINDJOGGER VIDEOQUIZ 9

CHAPTER 9 • Factoring

Round 1

Question 1

Classify the number 5.

- A. composite
- B. greatest common factor
- C. prime
- D. polynomial

The answer is C.

Question 2

To factor $x^2 + 4x - 21$, find the two numbers whose sum is 4 and whose product is _____.

- A. 4
- B. -21
- C. 1
- D. 21

The answer is B.

Question 3

A polynomial that cannot be written as a product of 2 polynomials with integral coefficients is called a _____.

- A. prime number
- B. prime polynomial
- C. perfect square trinomial
- D. composite number

The answer is B.

Question 4

Which polynomial is *not* a perfect square trinomial?

- A. $4v^2 - 36v + 81$
- B. $16q^2 + 40q + 25$
- C. $6m^2 + 10m + 4$
- D. $9t^2 + 12t + 4$

The answer is C.

Question 5

What is the solution of $x(x + 3) = 0$?

- A. $\{-3\}$
- B. $\{0, 3\}$
- C. $\{x^2 + 3x\}$
- D. $\{0, -3\}$

The answer is D.

Round 2

Question 1

Find the GCF of $90a^2b$ and $42abc$.

- A. $2ab$
- B. $3ab$
- C. $6ab$
- D. $12ab$

The answer is C.

Question 2

Factor $12x^3 - 18x^2y + 30x^2$.

- A. $2x^2(6x - 9xy + 15)$
- B. $3x(4x - 6xy + 10x)$
- C. $6x^2(6x - 3y + 5)$
- D. $6x^2(2x - 3y + 5)$

The answer is D.

Question 3

Solve the equation $(x - 3)^2 = 11$.

- A. $x = \pm\sqrt{8}$
- B. $x = 3 \pm\sqrt{11}$
- C. $x = -\sqrt{11} \pm -3$
- D. $x = \pm\sqrt{14}$

The answer is B.

MINDJOGGER VIDEOQUIZ 9

CHAPTER 9 • Factoring (con't)

Question 4

Factor $27g^2 - 12h^2$.

- A. $(3g + 6h)(9g - 6h)$
- B. $(3g - 2h)(9g + 6h)$
- C. $3(3g - 2h)(3g + 2h)$
- D. This binomial is prime.

The answer is C.

Round 3

Question 1

Which expression in factored form represents the area of the deck?

- A. $4(24 + 2b + 3a)$
- B. $4(5 + 2b + 3a)$
- C. $2(48 + 4b + 6a + ab)$
- D. $(8 + a)(12 + b)$

The answer is A.

Question 2

The measure of the area of a rectangle is $3x^2 - 2xy + 9x - 6y$. Find the dimensions of the rectangle if they can be represented by binomials with integral coefficients.

- A. $(3x - 2y)(x - 3)$
- B. $(3x + 2y)(x + 3)$
- C. $(3x - 2y)(x + 3)$
- D. $(3x + 2y)(x - 3)$

The answer is C.

Question 3

Sixteen times a number squared is 64. Find the number.

- A. ± 2
- B. -8
- C. $\pm 4\sqrt{2}$
- D. ± 16

The answer is A.

Question 4

How long is a ball in the air if it is thrown 4 feet from the ground at a velocity of 38 feet per second and a fan in the stands catches it on the way down, 16 feet above the field? *Hint:* Use the vertical motion model $h = -16t^2 + vt + s$.

- A. 8 seconds
- B. $\frac{3}{8}$ second
- C. $2\frac{3}{8}$ seconds
- D. 2 seconds

The answer is D.

MINDJOGGER VIDEOQUIZ 10

CHAPTER 10 • Quadratic and Exponential Functions

Round 1

Question 1

Which equation represents a quadratic function?

- A. $y^2 = x + 2$
- B. $4x + 2y = 7$
- C. $y^2 = 3x^2 + 2x - 5$
- D. $y = 2x^2 + 7x + 7$

The answer is D.

Question 2

The solutions of a quadratic equation are called the _____.

- A. roots
- B. y-coordinates
- C. axis of symmetry
- D. vertices

The answer is A.

Question 3

Which number should be added to each side of $x^2 - 10x = -12$ in order to solve by completing the square?

- A. 5
- B. -10
- C. 36
- D. 25

The answer is D.

Question 4

A function in which the variable is an exponent is called _____.

- A. a linear function
- B. an exponential function
- C. a compound function
- D. a geometric function

The answer is B.

Question 5

Which equation represents exponential growth?

- A. $y = 12(0.15)^x$
- B. $y = 10(1.29)^x$
- C. $y = 710(0.74)^x$
- D. $y = 300(0.56)^x$

The answer is B.

Round 2

Question 1

Find the vertex of the graph of $y = 4x^2 + 24x + 11$.

- A. $(-5.5, 0)$
- B. $(-3, -25)$
- C. $(0, 11)$
- D. $(-1.5, 0)$

The answer is B.

Question 2

Find the solution of $x^2 - 6x + 7 = 11$ by completing the square.

- A. $x = 9 \pm \sqrt{13}$
- B. $x = 6 \pm 3\sqrt{3}$
- C. $x = 3 \pm \sqrt{13}$
- D. $x = 3 \pm 3\sqrt{3}$

The answer is C.

Question 3

Solve $2x^2 + 5x - 3 = 0$ by using the Quadratic Formula.

- A. $\frac{1}{2}, -3$
- B. $-\frac{3}{2}, 1$
- C. $3, -\frac{1}{2}$
- D. $0, 5$

The answer is A.

MINDJOGGER VIDEOQUIZ 10

CHAPTER 10 • Quadratic and Exponential Functions (con't)

Question 4

Find the geometric mean in the sequence shown.

8, ____, 32

- A. ± 4
- B. ± 2
- C. $-\sqrt{26}$
- D. ± 16

The answer is D.

Round 3

Question 1

The total amount of money spent at a mall can be represented by the function $T(x) = 12(1.12)^x$, where x is the number of years since the opening in 1992. Find the sales for the mall in 2003 to the nearest dollar.

- A. \$33 million
- B. \$38.6 million
- C. \$42 million
- D. \$38 million

The answer is C.

Question 2

The perimeter of each inscribed equilateral triangle is one-half the perimeter of the next larger triangle. What is the perimeter of the smallest triangle?

- A. 13.5 cm
- B. 6.75 cm
- C. 2.25 cm
- D. 4.5 cm

The answer is B.

Question 3

Felicia bought a car for \$14,550. If the car depreciates 15% per year, what will the value of the car be at the end of 4 years? Round to the nearest dollar.

- A. \$8117
- B. \$6955
- C. \$5220
- D. \$7595

The answer is D.

Question 4

A baseball is thrown vertically up from ground level. Its distance d in feet after t seconds is given by $d = 96t - 16t^2$. Find the values of t when d is 108 feet. Hint: Use the Quadratic Formula.

- A. 4.5 s and 1.5 s
- B. 24 s and 27 s
- C. 7.4 s and 3.4 s
- D. 4.9 s and 2.3 s

The answer is A.

MINDJOGGER VIDEOQUIZ 11

CHAPTER 11 • Radical Expressions and Triangles

Round 1

Question 1

Which equation could be used to find the missing side of the right triangle?

- A. $12 = y + 8$
- B. $8^2 = y^2 + 12^2$
- C. $y^2 = 8^2 + 12$
- D. $12^2 = y^2 + 8^2$

The answer is D.

Question 2

Identify the radicand in the expression $4y^2\sqrt{7x}$.

- A. 4
- B. $7x$
- C. $4y^2$
- D. $y^2\sqrt{7x}$

The answer is B.

Question 3

Which of the following is a radical equation?

- A. $y^2 = 3x + 2$
- B. $\sqrt{x^2 + 3}$
- C. $2x + 4 = 5$
- D. $x = \frac{\sqrt{y}}{3}$

The answer is D.

Question 4

Which trigonometric ratio is shown below?

$$\frac{\text{measure of leg opposite } \angle A}{\text{measure of hypotenuse}}$$

- A. cosine
- B. tangent
- C. sine
- D. angle of elevation

The answer is C.

Question 5

If $\triangle ABC \sim \triangle DEF$ then

$$\frac{AB}{DE} = \frac{AC}{?}$$

- A. DE
- B. DF
- C. AB
- D. EF

The answer is B.

Round 2

Question 1

What is the simplest form of $\sqrt{20x^2y^3}$?

- A. $2x^2y^2\sqrt{5y}$
- B. $4xy\sqrt{2xy^2}$
- C. $10x^2y^2\sqrt{2y}$
- D. $4x^2y^2\sqrt{5y}$

The answer is A.

Question 2

What is the product of $(\sqrt{6} - 2\sqrt{3})$ and $(4 + \sqrt{3})$?

- A. $2\sqrt{6} + 3 - 8\sqrt{3}$
- B. $4\sqrt{6} + 3\sqrt{2} - 8\sqrt{3} - 6$
- C. $2\sqrt{6} + 3\sqrt{2} - 8\sqrt{3} - 6$
- D. $4\sqrt{6} + 3\sqrt{2} - 4\sqrt{3} - 6$

The answer is B.

Question 3

Find the solution of $\sqrt{4x-5} + 3 = 18$.

- A. 3.25
- B. 57.5
- C. 111.5
- D. 109

The answer is B.

MINDJOGGER VIDEOQUIZ 11

CHAPTER 11 • Radical Expressions and Triangles (con't)

Question 4

Find the value of r if the distance between points with coordinates $(5, 4)$ and $(3, r)$ is $\sqrt{13}$ units.

- A. 7 or 1
- B. 9 or 7
- C. -1 or -7
- D. 8 or 7

The answer is A.

Round 3

Question 1

Find the area of the rectangle in simplest form.

- A. $36\sqrt{2} - 6\sqrt{30}$ units²
- B. $21 - 6\sqrt{30}$ units²
- C. $21\sqrt{2} - 6\sqrt{11}$ units²
- D. $4\sqrt{3} - 2\sqrt{5} + 3\sqrt{6}$ units²

The answer is A.

Question 2

Calculate the angle of elevation the ramp shown makes with the horizontal. Round to nearest tenth.

- A. 3.7°
- B. 2.5°
- C. 87.5°
- D. 0.1°

The answer is B.

Question 3

Refer to the diagram. What is the length of the stairway from the bottom to the top?

- A. 18 ft
- B. 20 ft
- C. 28 ft
- D. 36 ft

The answer is B.

Question 4

After a coordinate grid is superimposed on a map, Mika's house is at $(42, 112)$ and her mom's house is at $(-46, 40)$. Find the distance from her house to her mom's house to the nearest mile.

- A. 176 mi
- B. 72 mi
- C. 114 mi
- D. 132 mi

The answer is C.

MINDJOGGER VIDEOQUIZ 12

CHAPTER 12 • Rational Expressions and Equations

Round 1

What are the excluded values of the rational expression $\frac{x^2 + 2x - 3}{x + 2}$?

- A. -3 and -1
- B. -3 and 1
- C. -2
- D. -2 and 1

The answer is C.

Question 2

What is the least common denominator of the equation

$$\frac{3}{4} - \frac{1}{2b} = \frac{2}{3}$$

- A. $4b$
- B. $12b$
- C. $8b^2$
- D. $12b^2$

The answer is B.

Question 3

A fraction that has one or more fractions in the numerator or denominator is called a _____.

- A. complex fraction
- B. mixed expression
- C. least common denominator
- D. improper fraction

The answer is A.

Question 4

For which equation is the number 2 an extraneous solution?

- A. $5 = x + 3$
- B. $\frac{6}{x-2} = \frac{2}{x-2}$
- C. $\frac{x-2}{4} = 12$
- D. $\frac{2-x}{7} = x-2$

The answer is B.

Question 5

Which equation illustrates the product rule for inverse variation?

- A. $x_1x_2 = y_1y_2$
- B. $\frac{x_1}{x_2} = \frac{y_1}{y_2}$
- C. $\frac{x_1}{y_1} = \frac{x_2}{y_2}$
- D. $x_1y_1 = x_2y_2$

The answer is D.

Round 2

Question 1

Find the sum of

$$\frac{3x}{x-2y} \text{ and } \frac{x+4y}{x-2y}$$

- A. $\frac{4x+4y}{x-2y}$
- B. $\frac{x+y}{x-y}$
- C. $\frac{2x+2y}{x-y}$
- D. $2x+4y$

The answer is A.

MINDJOGGER VIDEOQUIZ 12

CHAPTER 12 • Rational Expressions and Equations (con't)

Question 2

Find $\frac{n^2 + 2n - 3}{n^2 + 4n + 4} \div \frac{n + 3}{n^2 - 4}$.

- A. $\frac{(n + 1)(n - 3)}{n + 3}$
B. $\frac{(n - 1)(n - 2)}{n + 2}$
C. $\frac{n - 1}{(n + 2)(n - 2)}$
D. $n - 1$

The answer is B.

Question 3

Find the product of

$\frac{8m^2}{3p}$ and $\frac{15p}{6m}$.

- A. $\frac{40m}{3}$
B. $\frac{20m^2}{3p^2}$
C. $\frac{20m}{3}$
D. $\frac{30m}{3}$

The answer is C.

Question 4

Find the quotient when

$20h^3 - 35h^2 + 15$

is divided by $5h$.

- A. $4h^2 - 7h + 3$
B. $4h^2 - 7h + \frac{3}{h}$
C. $4h^2 - 35h^2 + 15$
D. $100h^4 - 175h^3 + 75h$

The answer is B.

Round 3

Question 1

Sachi is learning to walk. She can walk about 5 feet in 3 seconds. Find the rate in miles per hour.

- A. 0.02 mph
B. 0.03 mph
C. 1.14 mph
D. 1.66 mph

The answer is C.

Question 2

A rectangular garden has an area of $3x^2 + 10x - 8$ square units and a width of $x + 4$ units. Find its length.

- A. $3x^3 + 22x^2 + 32x - 32$ units
B. $x - 2$ units
C. $3x^2 + 8$ units
D. $3x - 2$ units

The answer is D.

MINDJOGGER VIDEOQUIZ 12

CHAPTER 12 • Rational Expressions and Equations (con't)

Question 3

The length of a violin string varies inversely as the frequency of its vibrations.

If a 10 inch string vibrates at a frequency of 512 cycles per second, find the frequency of a 9 inch string.

- A. 620.1 cycles per second
B. 568.9 cycles per second
C. 480.4 cycles per second
D. 375.2 cycles per second

The answer is B.

Question 4

Jordan and Carla decide to work together to build toy boxes. Jordan can build a toy box in 4 hours while Carla can build one in 3 hours. How long to build a toy box if they work together?

- A. $\frac{7}{12}$ hour
B. $2\frac{1}{2}$ hours
C. $1\frac{5}{7}$ hours
D. $3\frac{1}{2}$ hours

The answer is C.

MINDJOGGER VIDEOQUIZ 13

CHAPTER 13 • Statistics

Round 1

Question 1

Suppose every eighth student standing in a line is chosen to participate in a survey. What type of random sample does this represent?

- A. observational
- B. systematic
- C. stratified
- D. simple

The answer is B.

Question 2

Each entry in a matrix is called _____.

- A. an element
- B. a row
- C. a column
- D. a dimension

The answer is A.

Question 3

Which term means a value that is much less or much greater than the rest of a set of data?

- A. range
- B. median
- C. outlier
- D. lower or upper quartile

The answer is C.

Question 4

What does the indicated vertical line in the box of a box-and-whisker plot represent?

- A. interquartile range
- B. median
- C. mean
- D. mode

The answer is B.

Question 5

Which of the following is not a characteristic of a histogram?

- A. data organized into equal intervals
- B. data displayed on a number line
- C. visual summary of a frequency table
- D. a bar graph

The answer is B.

Round 2

Question 1

Which statement *best* classifies the sample below?

A teacher needs a sample of work from 5 students in one class. She selects work from the first 5 students who respond to the teacher's request.

- A. biased; voluntary response
- B. unbiased; simple
- C. unbiased; stratified
- D. biased; convenience

The answer is A.

MINDJOGGER VIDEOQUIZ 13

CHAPTER 13 • Statistics (con't)

Question 2

If $A = \begin{bmatrix} 2 & 7 & -5 \\ -1 & 6 & 8 \end{bmatrix}$, and

$$B = \begin{bmatrix} 3 & -7 & -3 \\ 4 & 2 & -2 \end{bmatrix}$$

find $A + B$.

- A. $\begin{bmatrix} 1 & 14 & -2 \\ 5 & 4 & 10 \end{bmatrix}$
- B. $\begin{bmatrix} 6 & 0 & 15 \\ -4 & 12 & 8 \end{bmatrix}$
- C. $\begin{bmatrix} 5 & 0 & -8 \\ 3 & 8 & 6 \end{bmatrix}$
- D. $\begin{bmatrix} 6 & -49 & 15 \\ -4 & 12 & -16 \end{bmatrix}$

The answer is C.

Question 3

Which measurement class contains the median for the data shown in the histogram?

- A. 75-80
- B. 90-95
- C. 85-90
- D. 80-85

The answer is D.

Question 4

Find the interquartile range of the data shown in the stem-and-leaf plot.

Stem	Leaf
4	1 4 7 8
5	8
6	2 4 6
7	1 1 8 9

$$4|1 = 41$$

- A. 63
- B. 23.5
- C. 17.5
- D. 14

The answer is B.

Round 3

Question 1

Which matrix represents the nutritional value of having one soft drink and 2 cookies?

Food	Calories	Protein (grams)	Fat (grams)	Saturated (grams)
Soft Drink	160	0	0	0
Cookie	185	2	11	3.9

- A. $\begin{bmatrix} 755 & 2 & 11 & 3.9 \end{bmatrix}$
- B. $\begin{bmatrix} 530 & 4 & 22 & 7.8 \end{bmatrix}$
- C. $\begin{bmatrix} 370 & 2 & 22 & 3.9 \end{bmatrix}$
- D. $\begin{bmatrix} 505 & 2 & 22 & 7.8 \end{bmatrix}$

The answer is B.

MINDJOGGER VIDEOQUIZ 13

CHAPTER 13 • Statistics (con't)

Question 2

What best describes the distribution of data displayed in the histogram shown?

- A. skewed to the left
- B. skewed to the right
- C. even
- D. symmetrical

The answer is A.

Question 3

Which car has the greatest interquartile range in the miles per gallon?

- A. car A
- B. car B
- C. car C
- D. car D

The answer is D.

Question 4

Find the lower quartile, median, and upper quartile of the data in the table.

Vegetable	Calories*
Asparagus	14
Broccoli	25
Brussels sprouts	60
Carrots	28
Corn	66
Green Beans	30

* one serving

- A. 14.5, 29, 63
- B. 25, 29, 60
- C. 20.5, 14, 66
- D. 25, 17, 54

The answer is B.

MINDJOGGER VIDEOQUIZ 14

CHAPTER 14 • Probability

Round 1

Question 1

An arrangement or listing in which order or placement is important is called a _____.

- A. combination
- B. permutation
- C. compound event
- D. simulation

The answer is B.

Question 2

An event where one outcome affects the outcome of another event is a(an) _____.

- A. simple event
- B. compound event
- C. dependent event
- D. independent event

The answer is C.

Question 3

What type of probability is determined mathematically and describes what should happen?

- A. theoretical
- B. experimental
- C. empirical
- D. simulation

The answer is A.

Question 4

What is the meaning of the expression shown below?
 $3!$

- A. prime factorization of 3
- B. square root of 3
- C. count from 3 to 1
- D. 3 factorial

The answer is D.

Question 5

To have a valid probability distribution what must the sum of the probabilities for each value of X equal?

- A. greater than 1
- B. 1
- C. less than 1
- D. the number of possible values

The answer is B.

Round 2

Question 1

Find the value of $9!$.

- A. 362,880
- B. 181,449
- C. 39,916,800
- D. 81

The answer is A.

Question 2

Find ${}_{12}P_4$.

- A. 95,040
- B. 1320
- C. 154,440
- D. 11,880

The answer is D.

MINDJOGGER VIDEOQUIZ 14

CHAPTER 14 • Probability (con't)

Question 3

Refer to the table. What is the probability that a student gets a D or fails?

X = Grade	A	B	C	D	F
Probability	0.10	0.40	0.30	0.15	0.05

- A. 0.20
- B. 0.15
- C. 0.05
- D. 0.80

The answer is A.

Question 4

A die is rolled and the spinner shown is spun. Find $P(4 \text{ and } C)$.

- A. $\frac{1}{6}$
- B. $\frac{1}{48}$
- C. $\frac{1}{14}$
- D. $\frac{1}{24}$

The answer is B.

Round 3

Question 1

Four coins are tossed. Find the theoretical probability that three of the coins show heads and one coin shows tails.

- A. $\frac{3}{16}$
- B. $\frac{16}{3}$
- C. 3!
- D. 13

The answer is A.

Question 2

If 5 out of 8 students are to be placed on a school committee how many different groups of 5 students could be selected?

- A. 336
- B. 28
- C. 56
- D. 256

The answer is C.

Question 3

A code consists of 4 letters from the alphabet and each letter can be used more than once. How many different codes are possible?

- A. 17,576
- B. 4.03×10^{26}
- C. 104
- D. 456,976

The answer is D.

Question 4

A bag contains 4 red, 5 blue, 3 green, and 3 yellow marbles. Once a marble is selected, it is not replaced. Find $P(\text{red, then green})$.

- A. $\frac{2}{35}$
- B. $\frac{7}{210}$
- C. $\frac{12}{225}$
- D. $\frac{6}{35}$

The answer is A.

Glencoe MindJogger Videoquiz Scoring Sheet

Chapter _____ Names _____

Date _____

Period _____

Round 1

Question 1 _____
 Question 2 _____
 Question 3 _____
 Question 4 _____
 Question 5 _____ Total Points _____

Round 2

Question 1 _____
 Question 2 _____
 Question 3 _____
 Question 4 _____ Total Points _____

Round 3

Question 1 _____
 Question 2 _____
 Question 3 _____
 Question 4 _____ Total Points _____

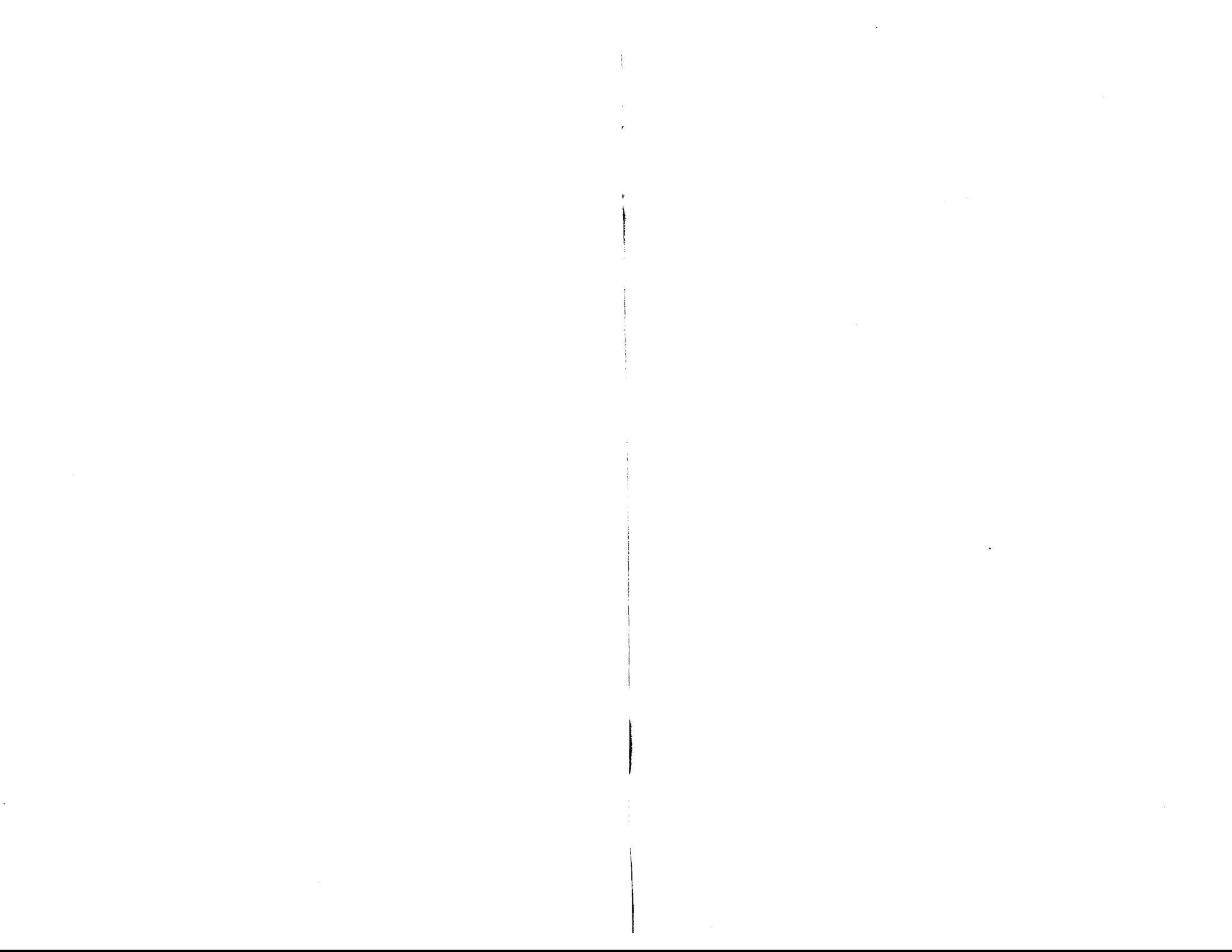
Total points from all three rounds _____

A

B

C

D





**Glencoe
McGraw-Hill**

0-07-830699-X