

Important Concepts . . .

Preview Review



Mathematics Grade 8 TEACHER KEY
W2 - Quiz

Important Concepts of Grade 8 Mathematics

W1 - Lesson 1	Perfect Squares and Square Roots
W1 - Lesson 2	Working with Ratios and Rates
W1 - Lesson 3	Multiplying and Dividing Fractions
W1 - Lesson 4	Multiplying and Dividing Integers
W1 - Lesson 5	Working with Percents
W1 - Review	
W1 - Quiz	
W2 - Lesson 1	Modelling and Solving Linear Equations Using Algebra Tiles
W2 - Lesson 2	Solving Linear Equations
W2 - Lesson 3	Graphing and Analyzing Linear Relations
W2 - Lesson 4	Critiquing the Representation of Data
W2 - Lesson 5	Probability of Independent Events
W2 - Review	
W2 - Quiz	
W3 - Lesson 1	Pythagorean Theorem
W3 - Lesson 2	Calculating Surface Area
W3 - Lesson 3	Calculating Volume
W3 - Lesson 4	Drawing 3-D Objects
W3 - Lesson 5	Congruence of Polygons
W3 - Review	
W3 - Quiz	

Materials Required

Protractor
Ruler
Calculator

**No Textbook
Required**

**This is a stand-
alone course.**

Mathematics Grade 8

Version 6

Preview/Review W2 - Quiz

ISBN 1-891894-00-6

Publisher: Alberta Distance Learning Centre

Written by: Monica dHamrait

Reviewed by: Patty Rogerson

Project Coordinator: Donna Silgard

Preview/Review Publishing Coordinating Team:

Heather Martel and Nicole Mckeand



Alberta Distance Learning Centre has an Internet site that you may find useful. The address is as follows: <http://www.adlc.ca>

The use of the Internet is optional. Exploring the electronic information superhighway can be educational and entertaining. However, be aware that these computer networks are not censored. Students may unintentionally or purposely find articles on the Internet that may be offensive or inappropriate. As well, the sources of information are not always cited and the content may not be accurate. Therefore, students may wish to confirm facts with a second source.

ALL RIGHTS RESERVED

Copyright © 2010, by Alberta Distance Learning Centre, 4601-63 Avenue, Barrhead, Alberta, Canada, T7N 1P4. Additional copies may be obtained from Alberta Distance Learning Centre.

No part of this courseware may be reproduced or transmitted in any form, electronic or mechanical, including photocopying (unless otherwise indicated), recording, or any information storage and retrieval system, without the written permission of Alberta Distance Learning Centre.

Every effort has been made both to provide proper acknowledgement of the original source and to comply with copyright law. If cases are identified where this effort has been unsuccessful, please notify Alberta Distance Learning Centre so that appropriate corrective action can be taken.

IT IS STRICTLY PROHIBITED TO COPY ANY PART OF THESE MATERIALS UNDER THE TERMS OF A LICENCE FROM A COLLECTIVE OR A LICENSING BODY.

Preview/Review Concepts for Grade Eight Mathematics

Teacher Key



W2 - Quiz

QUIZ

This quiz should take between 25 and 40 minutes.

A pencil, eraser, and a scrap piece of paper (for rough work) are the only materials allowed for the quiz.

Teacher may choose to weight each question differently

Print your name neatly on the quiz.

Complete all questions on the quiz.

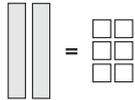
Hand in the quiz when you complete it.

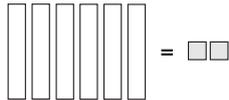
Week 2 - Quiz

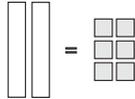
Part I: Multiple-Choice

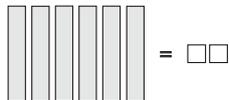
Be sure to read each question carefully. Write the letter of the **best** answer in the blank in front of each question.

 C 1. Which of the following arrangement of algebra tiles represents $-2x = 6$?

A. 

B. 

C. 

D. 

 B 2. Which of the following situations are not examples independent events?

- A. Choosing 3 marbles out of a bag without putting the others back
- B. Picking 3 flowers out of your garden for your grandmother's bouquet.
- C. Picking 3 snacks for your 3 friends; you let the oldest friend choose their snack first, then the second oldest, and then the youngest chooses from what is left.
- D. Choosing 3 cookies from 3 different cookie jars

 B 3. Which of the following ordered pairs represents a point on the graph of $y = 2x + 14$?

- A. (5, 21)
- B. (5, 24)
- C. (24, 5)
- D. (21, 5)

C

4. Which type of graph would best represent all the different ingredients found in a birthday cake?
- A. Bar graph
 - B. Line graph
 - C. Circle graph
 - D. Pictograph

Part II: Short Answer

Solve for the unknowns in the following linear equations. (2 marks each)

1. $9y = -63$

$$\frac{9y}{9} = \frac{-63}{9}$$
$$y = -7$$

2. $8b + 12 = -36$

$$8b + 12 = -36$$
$$8b + 12 - 12 = -36 - 12$$
$$\frac{8b}{8} = \frac{-48}{8}$$
$$b = -6$$

3. $-4(x - 12) = 40$

$$-4(x - 12) = 40$$
$$-4(x) - 4(-12) = 40$$
$$-4x + 48 = 40$$
$$-4x + 48 - 48 = 40 - 48$$
$$\frac{-4x}{-4} = \frac{-8}{-4}$$
$$x = 2$$

$$4. \quad \frac{q}{-6} + 2 = 8$$

$$\frac{q}{-6} + 2 = 8$$

$$\frac{q}{-6} + 2 - 2 = 8 - 2$$

$$\frac{q}{-6} = 6$$

$$(-6)\frac{q}{-6} = 6(-6)$$

$$q = -36$$

$$5. \quad 15 + \frac{n}{4} = 5$$

$$15 + \frac{n}{4} = 5$$

$$15 - 15 + \frac{n}{4} = 5 - 15$$

$$\frac{n}{4} = -10$$

$$4\left(\frac{n}{4}\right) = (-10)4$$

$$n = -40$$

$$6. \quad 3 - 7s = 24$$

$$3 - 7s = 24$$

$$3 - 3 - 7s = 24 - 3$$

$$-7s = 21$$

$$\frac{-7s}{-7} = \frac{21}{-7}$$

$$s = -3$$

7. Calculate the probability of each of the following events.

a. Tossing a heads on a quarter and a heads on a dime

$$\begin{aligned}P(\mathbf{A \textit{ and } B}) &= P(\mathbf{A}) \times P(\mathbf{B}) \\P(\mathbf{heads \textit{ and } heads}) &= P(\mathbf{heads}) \times P(\mathbf{heads}) \\&= \frac{1}{2} \times \frac{1}{2} \\&= \frac{1}{4}\end{aligned}$$

b. Rolling a multiple of 3 on a regular die and tossing a heads on a coin

$$\begin{aligned}P(\mathbf{A \textit{ and } B}) &= P(\mathbf{A}) \times P(\mathbf{B}) \\P(\mathbf{multiple \textit{ of } 3 \textit{ and } heads}) &= P(\mathbf{multiple \textit{ of } 3}) \times P(\mathbf{heads}) \\&= \frac{2}{6} \times \frac{1}{2} \\&= \frac{2}{12} \\&= \frac{1}{6}\end{aligned}$$

8. Bin owns 3 car rental companies. The first company is comprised of 50% SUV's. The second company is comprised of 66% SUV's. The third company is comprised of 30% SUV's. What is the probability that all the SUV's would be rented out on the same day?

Step 1: Convert each percentage into a decimal number.

$$50\% = 0.50 = \text{event } A$$

$$66\% = 0.66 = \text{event } B$$

$$30\% = 0.30 = \text{event } C$$

Step 2: Apply the formula to calculate the probability.

$$P(A \text{ and } B \text{ and } C) = P(A) \times P(B) \times P(C)$$

$$\begin{aligned} P(\text{SUV in 1st and 2nd and 3rd}) &= P(\text{SUV in 1st}) \times P(\text{SUV in 2nd}) \times P(\text{SUV in 3rd}) \\ &= 0.50 \times 0.66 \times 0.30 \\ &= 0.099 \end{aligned}$$

Step 3: Express the decimal number as a percentage.

$$0.099 \times 100 = 9.9\%$$

The probability of all the SUV's being rented out in all three car rental companies on the same day is 9.9%.

