

Important Concepts . . .

Preview Review



Mathematics Grade 8 TEACHER KEY

W1 - 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 W1 - Quiz

ISBN 1-891894-00-6

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Preview/Review Concepts for Grade Eight Mathematics

Teacher Key



Week 1 - 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 1 - Quiz

Part 1: Multiple-Choice

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

- D 1. Which of the following expressions represents a rate?
- A. Bringing 5 oranges and 3 apples to a picnic
 - B. Observing 3 red cars and 5 black cars in a parkade
 - C. Arranging 6 roses and 2 daisies in a floral bouquet
 - D. Driving 100 km in one hour
- A 2. If a CD player that costs \$69.99 is on sale for 20% off in Alberta, how much is the total cost of the item, including all applicable taxes?
- A. \$58.79
 - B. \$55.9
 - C. \$14.70
 - D. \$13.99
- C 3. Which of the following ratios is equivalent to 8 : 56?
- A. 56 : 8
 - B. $\frac{56}{8}$
 - C. 1 : 7
 - D. 7 : 1
- B 4. The mixed number $4\frac{2}{5}$ expressed as an improper fraction is
- A. $\frac{42}{5}$
 - B. $\frac{22}{5}$
 - C. $\frac{14}{5}$
 - D. $\frac{11}{5}$

Part 2: Short Answer

Show all your work. Simplify the answer to lowest terms.

1. Calculate the square roots of the following numbers. (1 mark each)

a. $\sqrt{76}$

$$\sqrt{76} \approx 8.72$$

b. $\sqrt{150}$

$$\sqrt{150} \approx 12.25$$

c. $\sqrt{1764}$

$$\sqrt{1764} = 42$$

2. Calculate the square of the following numbers. (1 mark each)

a. 7

$$7^2 = 49$$

b. 12

$$12^2 = 144$$

c. 15

$$15^2 = 225$$

3. Evaluate each of the following expressions. (3 marks each)

a. $\frac{3}{4} \times \frac{7}{9} =$

$$\begin{aligned} \frac{3}{4} \times \frac{7}{9} &= \frac{\cancel{3}^1}{4} \times \frac{7}{\cancel{9}_3} \\ &= \frac{1 \times 7}{4 \times 3} \\ &= \frac{7}{12} \end{aligned}$$

b. $3\frac{1}{2} \div 1\frac{2}{3} =$

$$\begin{aligned} 3\frac{1}{2} \div 1\frac{2}{3} &= \frac{7}{2} \div \frac{5}{3} \\ &= \frac{7}{2} \times \frac{3}{5} \\ &= \frac{7 \times 3}{2 \times 5} \\ &= \frac{21}{10} \\ &= 2\frac{1}{10} \end{aligned}$$

c. $2\frac{4}{5} \div \frac{21}{25} =$

$$\begin{aligned} 2\frac{4}{5} \div \frac{21}{25} &= \frac{14}{5} \div \frac{21}{25} \\ &= \frac{\cancel{14}^2}{\cancel{5}_1} \times \frac{\cancel{25}^5}{\cancel{21}_3} \\ &= \frac{2 \times 5}{1 \times 3} \\ &= \frac{10}{3} \\ &= 3\frac{1}{3} \end{aligned}$$

d. $4\frac{1}{6} \times 2\frac{4}{5} =$

$$\begin{aligned} 4\frac{1}{6} \times 2\frac{4}{5} &= \frac{25}{6} \times \frac{14}{5} \\ &= \frac{\overset{5}{\cancel{25}}}{\underset{3}{\cancel{6}}} \times \frac{\overset{7}{\cancel{14}}}{\underset{1}{\cancel{5}}} \\ &= \frac{5 \times 7}{3 \times 1} \\ &= \frac{35}{3} \\ &= 11\frac{2}{3} \end{aligned}$$

e. $(-8) \times (-9) =$

$$(-8) \times (-9) = +72$$

f. $(+35) \div (-7) =$

$$(+35) \div (-7) = -5$$

g. $(+11) \times (-6) =$

$$(+11) \times (-6) = -66$$

h. $(-69) \div (-3) =$

$$(-69) \div (-3) = +23$$

$$\begin{aligned}
 \text{i. } & \frac{1}{2} + \left(1\frac{3}{4} - \frac{5}{8}\right) \times \frac{4}{7} = \\
 & = \frac{1}{2} + \left(1\frac{3}{4} - \frac{5}{8}\right) \times \frac{4}{7} \\
 & = \frac{1}{2} + \left(\frac{7}{4} - \frac{5}{8}\right) \times \frac{4}{7} \\
 & = \frac{1}{2} + \left(\frac{14}{8} - \frac{5}{8}\right) \times \frac{4}{7} \\
 & = \frac{1}{2} + \frac{9}{8} \times \frac{4}{7} \\
 & = \frac{1}{2} + \frac{9}{2} \times \frac{4^1}{7} \\
 & = \frac{1}{2} + \frac{9}{14} \\
 & = \frac{7}{14} + \frac{9}{14} \\
 & = \frac{16}{14} \\
 & = 1\frac{2}{14} \\
 & = 1\frac{1}{7}
 \end{aligned}$$

$$\begin{aligned}
 \text{j. } & 6^2 - 7 + 2((-3) + 4 \times 5) = \\
 & = 6^2 - 7 + 2((-3) + 4 \times 5) \\
 & = 6^2 - 7 + 2((-3) + 20) \\
 & = 6^2 - 7 + 2(17) \\
 & = 36 - 7 + 2(17) \\
 & = 36 - 7 + 34 \\
 & = 29 + 34 \\
 & = 63
 \end{aligned}$$

