Important Concepts . . .

Preview Review

Mathematics Grade 8 TEACHER KEY

W1 - Quiz

V6-10

Important Concepts of Grade 8 Mathematics

Materials Required

Protractor
Ruler
Calculator

No Textbook Required

This is a stand-alone course.

Mathematics Grade 8
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Preview/Review W1 - Quiz
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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

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

$$\frac{3}{4}\times\frac{7}{9}=\frac{{}^{1}\cancel{3}}{4}\times\frac{7}{\cancel{9}_{3}}$$
$$=\frac{1\times 7}{4\times 3}$$
$$=\frac{7}{12}$$

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

$$3\frac{1}{2}\div 1\frac{2}{3}=\frac{7}{2}\div\frac{5}{3}$$
$$=\frac{7}{2}\times\frac{3}{5}$$
$$=\frac{7\times 3}{2\times 5}$$
$$=\frac{21}{10}$$
$$=2\frac{1}{10}$$

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

$$2\frac{4}{5}\div\frac{21}{25}=\frac{14}{5}\div\frac{21}{25}$$
$$=\frac{{}^{2}\cancel{14}}{{}_{1}\cancel{5}}\times\frac{\cancel{25}^{5}}{\cancel{21}_{3}}$$
$$=\frac{2\times 5}{1\times 3}$$
$$=\frac{10}{3}$$
$$=3\frac{1}{3}$$

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

$$4\frac{1}{6}\times 2\frac{4}{5}=\frac{25}{6}\times\frac{14}{5}$$
$$=\frac{\cancel{25}^{5}}{\cancel{6}_{3}}\times\frac{\cancel{14}^{7}}{\cancel{5}_{1}}$$
$$=\frac{5\times 7}{3\times 1}$$
$$=\frac{35}{3}$$
$$=11\frac{2}{3}$$

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

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

i. $\frac{1}{2}+\left(1\frac{3}{4}-\frac{5}{8}\right)\times\frac{4}{7}=$

$=\frac{1}{2}+\underline{\left(1\frac{3}{4}-\frac{5}{8}\right)}\times\frac{4}{7}$

$=\frac{1}{2}+\left(\frac{7}{4}-\frac{5}{8}\right)\times\frac{4}{7}$

$=\frac{1}{2}+\left(\frac{14}{8}-\frac{5}{8}\right)\times\frac{4}{7}$

$=\frac{1}{2}+\underline{\frac{9}{8}\times\frac{4}{7}}$

$=\frac{1}{2}+\frac{9}{\cancel{8}_{2}}\times\frac{\cancel{4}^{1}}{7}$

$=\underline{\frac{1}{2}+\frac{9}{14}}$

$=\frac{7}{14}+\frac{9}{14}$

$=\frac{16}{14}$

$=1\frac{2}{14}$

$=1\frac{1}{7}$

j. $6^2-7+2\left(\left(-3\right)+4\times5\right)=$

$=6^2-7+2\underline{\left(\left(-3\right)+4\times5\right)}$

$=6^2-7+2\left(\left(-3\right)+20\right)$

$=\underline{6^2}-7+2\left(17\right)$

$=36-7+\underline{2\left(17\right)}$

$=\underline{36-7}+34$

$=\underline{29+34}$

$=63$


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