Gr. 7 Quiz – Adding and Subtracting Decimals

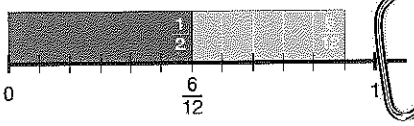
1. Use front-end estimation to estimate each sum or difference
   a. 4.025 – 5.786
   b. 12801 + 5.546
   c. 2.569 + 3.489
   d. 15.002 – 13.872
2. For each of the problems below first use front-end estimation to find what the answer should be close to. Then solve for the answer.
   a. Michael is on vacation and has been given a budget of $100 spending money. He already bought a t-shirt for $19.87, a hat for $15.99, a special lunch for $18.99 and some new shoes for $28.76. How much does he have left to spend for the remainder of his trip?
   b. When baking for his latest TUSC project Johnny needed to buy some ingredients. His mother gave him $10.00 to use at the co-op. In his cart he put a small bag of sugar for $2.99, one dozen eggs for $3.49, a packet of baking soda for $1.29, and a litre of milk for $1.99. Does he have enough? How much does he have left (if any)?
3. Using the table below as a guide; find at least two combinations of numbers that equal the sum shown.

$$\square.\square\square\square$$
$$+\ \square.\square\square\square$$
$$6.7\ 3\ 4$$

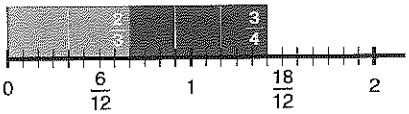
Gr 7 Quiz – Using Other Models to Add Fractions – 5.2

1. Write an addition equation for each picture.

a)



b)



2. Add. Sketch fraction strips and a number line to model each addition.

a) $\frac{2}{8} + \frac{3}{8}$ b) $\frac{2}{3} + \frac{1}{6}$

c) $\frac{3}{4} + \frac{2}{6}$ d) $\frac{1}{2} + \frac{2}{5}$

3. Prince Iluvchocolate and Princess Iprefercarrotcake were eating cheesecake at the Cheesecake factory. Prince Iluvchocolate at 2/3 of his piece of cheese cake and Princes Iprefercarrotcake at one ½ of her piece. They didn't want to waste it so they packed it up in a box to take back to the palace. How much did they have left to take home altogether?

Grade 7 Quiz – Square Roots and Representing Integers

ntegers

1.

Use coloured tiles to model each integer in two different ways.
Draw the tiles.

a) -5 b) 0
c) $+8$ d) -1
e) $+3$ f) -7

2. For each of the problems below write the number sentence and solve
   a) 6 yellow tiles and 1 red tile
   b) 5 yellow tiles and 7 red tiles
   c) 4 yellow tiles and 4 red tiles

3.

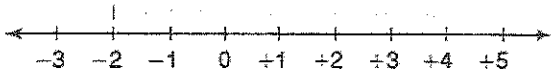
Use a number line to add.
Write the addition equations.

a) $(+3) + (+2)$ b) $(-5) + (-1)$
c) $(-10) + (+8)$ d) $(+6) + (-5)$
e) $(-8) + (+8)$ f) $(-5) + (+12)$

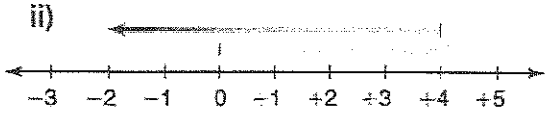
4.

Write the addition equation modelled by each number line.

i)



ii)



Square Roots

1) Solve the following by answering what each equals
   a. 4^2
   b. 7^2
   c. 9^2
2) Show that 36 is a square number. Use a diagram, symbols and words.
3) Find the side length of a square with each area.
   a. $81m^2$
   b. $144mm^2$
   c. $25cm^2$
4) A checkerboard has 64 squares on it. If on side of the checkerboard measures 20 inches, what is the measurement of one side of one square on the board?

gr 8 quiz - using models to multiply fractions - 3.2

1. Write each multiplication statement as repeated addition. Draw a picture to show each product.

   a) $4 \times \frac{1}{8}$ b) $7 \times \frac{3}{5}$

   c) $\frac{5}{6} \times 3$ d) $\frac{2}{9} \times 6$

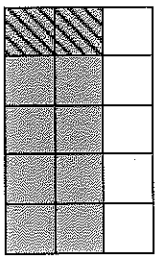
2. Multiply. Draw a number line to show each product.

   a) $\frac{1}{4} \times 7$ b) $8 \times \frac{3}{8}$

3. Draw a rectangle to find each product.

   a) $\frac{5}{8} \times \frac{1}{2}$ b) $\frac{2}{3} \times \frac{3}{4}$

4. For the picture below write a math sentence and solve.



5. Aiko says that $\frac{2}{3}$ of her stamp collection are Asian stamps. One-fifth of her Asian stamps are from India. What fraction of Aiko's stamp collection is from India? Estimate to check the solution is reasonable.

Mid-Unit Review

LESSON

2.1

1. Use a model to represent each product. Draw the model you used each time.
a) $(-9) \times (+4)$ b) $(-7) \times (-5)$
c) $(+4) \times (+8)$ d) $(+3) \times (-5)$

2. A glacier retreated about 2 m per day for 7 days. Use integers to find the total change in the length of the glacier.

3. The temperature rose 4°C each hour for 5 h. Use integers to find the total change in temperature.

2.2

4. Will each product be positive or negative? How do you know?
a) $(-8) \times (+5)$ b) $(-5) \times (-3)$
c) $(+12) \times (-4)$ d) $(+8) \times (+9)$

5. Find each product in question 4.

6. Find each product.
a) $(-20)(+14)$
b) $(-19)(-24)$
c) $(+40)(+27)$
d) $(+13)(-31)$

7. A swimming pool drains 35 L of water in 1 min. Find how much water drained out of the pool in 30 min. How can you model this situation with integers?

8. Copy each equation. Replace $\square$ with an integer to make the equation true.
a) $(+4) \times \square = -32$
b) $\square \times (-6) = +54$
c) $(-8) \times \square = -56$
d) $\square \times (-1) = +12$

2.3

9. Write 2 related multiplication equations for each division equation.
a) $(+27) \div (+3) = +9$
b) $(+14) \div (-7) = -2$
c) $(-21) \div (-3) = +7$
d) $(-26) \div (+2) = -13$

10. Use coloured tiles, a number line, or another model. Find each quotient.
a) $(+20) \div (+4)$ b) $(-24) \div (-6)$
c) $(+32) \div (-8)$ d) $(-36) \div (+4)$

11. The water level in a well dropped 5 cm each hour. The total drop in the water level was 30 cm. Use integers to find how long it took for the water level to change.

12. Maurice used the expression $(-18) \div (+3)$ to solve a word problem. What might the word problem have been? Solve the problem.

13. Explain how you can use a number line to model the quotient of $(+64) \div (-8)$.

Mid-Unit Review

LESSON

1.1

1. Which numbers below are perfect squares? Draw diagrams to support your answers.

a) 15 b) 26 c) 65 d) 100

1.2

2. Find a square root of each number.

a) 16 b) 49 c) 196 d) 400

3. Find.

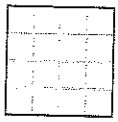
a) 11^2 b) $\sqrt{64}$ c) $\sqrt{169}$ d) $\sqrt{225}$

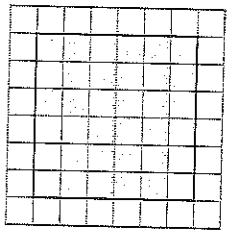
1.1
1.2

4. Copy each square onto 1-cm grid paper.

i) Find the area of each square.

ii) Write the side length of each square as a square root.

a) 

b) 

5. List the factors of each number below in order from least to greatest. Which of the numbers are square numbers? How do you know? For each square number below, write a square root.

a) 216 b) 364 c) 729

1.3

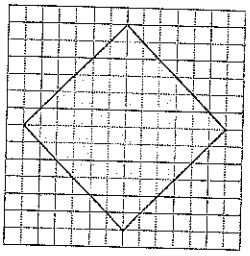
6. If you know a square number, how can you find its square root? Use diagrams, symbols, and words.

7. a) The area of a square is 24 cm^2. What is its side length? Why is the side length not a whole number?

b) The side length of a square is 9 cm. What is its area?

1.3
1.4

8. Copy this square onto 1-cm grid paper.



a) What is the area of the square?

b) Write the side length of the square as a square root.

c) Estimate the side length to one decimal place.

9. Find.

a) $\sqrt{12 \times 12}$ b) $\sqrt{34 \times 34}$

10. Between which two consecutive whole numbers does each square root lie? How do you know? Sketch a number line to show your answers.

a) $\sqrt{3}$ b) $\sqrt{65}$ c) $\sqrt{72}$ d) $\sqrt{50}$

11. Use guess and test to estimate each square root to two decimal places. Record each trial.

a) $\sqrt{17}$ b) $\sqrt{108}$ c) $\sqrt{33}$ d) $\sqrt{79}$