

# 10.2 Decimal Operations

## Chapter 10: Final Cumulative Review

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Class/Period: \_\_\_\_\_

### 10.31 Directions:

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Estimate, then calculate  $47.38 + 6.905$ . Use the estimate to check decimal placement.

### 10.34 Directions:

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Estimate, then calculate  $100 - 29.975$ . Use the estimate to check decimal placement.

### 10.32 Directions:

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Estimate, then calculate  $90.2 - 37.486$ . Use the estimate to check decimal placement.

### 10.35 Directions:

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Estimate, then calculate  $8.4 - 3.067$ . Use the estimate to check decimal placement.

### 10.33 Directions:

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Estimate, then calculate  $6.07 + 0.836 + 12.4$ . Use the estimate to check decimal placement.

### 10.36 Directions:

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Estimate, then calculate  $25.6 + 7.89 - 4.705$ . Use the estimate to check decimal placement.

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**10.37 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Multiply  $3.7 \times 4.8$ . Explain how place value determines the decimal position.

**10.40 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Multiply  $6.25 \times 3.04$ . Explain how place value determines the decimal position.

**10.38 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Multiply  $0.46 \times 2.5$ . Explain how place value determines the decimal position.

**10.41 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Multiply  $0.009 \times 8.2$ . Explain how place value determines the decimal position.

**10.39 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Multiply  $12.08 \times 0.7$ . Explain how place value determines the decimal position.

**10.42 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Multiply  $1.35 \times 0.06$ . Explain how place value determines the decimal position.

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**10.43 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Compute  $936 \div 24$ . Check the result by multiplication.

**10.46 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Compute  $7 \div 16$ . Check the result by multiplication.

**10.44 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Compute  $1728 \div 36$ . Check the result by multiplication.

**10.47 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Compute  $52.8 \div 0.6$ . Check the result by multiplication.

**10.45 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Compute  $45 \div 8$ . Check the result by multiplication.

**10.48 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Compute  $19.8 \div 0.45$ . Check the result by multiplication.

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#### 10.49 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Use the place-value chart to calculate  $47.38 + 6.905$  and explain why the decimal points align.

| Tens | Ones | Decimal Point | Tenths | Hundredths | Thousandths |
|------|------|---------------|--------|------------|-------------|
| 4    | 7    | .             | 3      | 8          | 0           |
| 0    | 6    | .             | 9      | 0          | 5           |

#### 10.50 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A runner travels 6.4 km in 0.8 hour. Find kilometers per hour and explain why dividing by a number less than 1 produces a quotient larger than 6.4.

#### 10.51 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A 12.6-meter rope is cut into pieces 0.45 meter long. How many complete pieces are made?

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**10.52 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

A grocery bill is \$38.47. A coupon subtracts \$5.75 and tax adds \$2.62. Find the final bill with one expression.

**10.55 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

A store sells 2.35 meters of fabric for \$18.80. Find the unit price per meter, rounded to the nearest cent.

**10.53 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

A car travels 287.5 miles on 11.5 gallons. Find miles per gallon.

**10.56 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Compare 4.8 divided by 0.6, 4.8 divided by 6, and 48 divided by 6 before calculating. Use divisor size and place value.

**10.54 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

A product is estimated by 4 times 2.5, which is 10. A student reports 0.96 for 3.84 times 2.5. Explain why the estimate proves the answer is unreasonable, then correct it.

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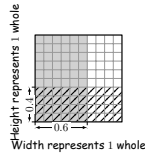
#### 10.57 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

The entire square represents 1 whole.

The gray region represents 0.6 of the width, and the striped region represents 0.4 of the height. The region with both types of shading represents the product.

- (a) Write the multiplication expression represented by the model.
- (b) How many hundredths are in the overlapping region?
- (c) Write the product as a decimal.
- (d) Explain why the overlapping squares represent the product.



#### 10.58 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A square has perimeter 31.2 cm. Find the side length and area.

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#### 10.59 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A machine fills 18 bottles in 2.7 minutes at a constant rate. How many bottles in 12.15 minutes?

#### 10.62 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Create a decimal division problem with quotient 12.5 and divisor between 0 and 1. Explain why the dividend works.

#### 10.60 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A price is increased by \$2.75, then multiplied by 1.2, giving \$25.50. Work backward to find the original price.

#### 10.63 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

A student aligns the final digits rather than decimal points when adding 7.8 and 0.456. Show the error and calculate correctly.

#### 10.61 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

The long-division work contains an incorrect subtraction. Identify the first error and complete the quotient.

$$\begin{array}{r} 39 \\ 249 \overline{) 36} \\ \underline{72} \\ 216 \\ \underline{182} \\ 34 \end{array}$$

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**10.64 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

A water bottle holds 0.75 L. How many bottles hold 18 L?

**10.66 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

Complete the missing digit:

$$4.\square 7 + 2.85 = 7.32$$

. Explain using place value.

**10.65 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

A store buys 24 items for \$187.20 and sells each for \$9.35. Find total profit.

**10.67 Directions:**

*Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..*

A student says  $0.04 \times 0.03 = 0.12$  because 4 times 3 is 12. Correct the reasoning with place value.

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### 10.68 Directions:

Complete all work on separate paper. Show calculations, reasoning, and labeled diagrams as appropriate..

Use the machine diagram to reverse the operations and find the input.

