Grade 7 Units 4 & 5 Week 5

Parents: Please help your child choose the most appropriate assignment(s) to complete each day. When the day's assignment is done, students finish the two reflection statements on this page.

Please note Extra Practice activities are on-level for the grade level. Re-Engage activities give students additional support.

Special Education students should use the Re-Engage lessons as shown in the weekly plans.

		Monday Tuesday		Wednesday	Thursday	Friday
Topic		Calculate percent discount.	Calculate percent markup.	Calculate commissions and fees.	Use proportions to determine percent of change.	Simplify expressions using the rules for adding integers.
Video Assignment		Unit 4 Lesson 2 Re-Engage A Re-Engage B Extra Practice	Unit 4 Lesson 4 Re-Engage Extra Practice	Unit 4 Lesson 5 Re-Engage Unit 4 Lesson 7 Re-Engage Extra Practice	Unit 4 Lesson 11 Re-Engage Extra Practice	Unit 5 Lesson 1 Re-Engage
		Unit 4 Lesson 2 Student Support Video	Unit 4 Lesson 4 Student Support Video	<u>Unit 4 Lesson 5</u> <u>Student Support Video</u>	Unit 4 Lesson 11 Student Support Video	Unit 5 Lesson 1 Student Support Video
	Practice	Integers Addition Fluency A	Integers Subtraction Fluency A	Integers Multiplication Fluency A	Integers Division Fluency A	Fraction-Decimal Conversion Fluency A
	ر	One thing I was successful with is	One thing I was successful with is	One thing I was successful with is	One thing I was successful with is	One thing I was successful with is
Reflection		One thing I need more help with is	One thing I need more help with is	One thing I need more help with is	One thing I need more help with is	One thing I need more help with is

Find this packet on swunmath.com. Click on the hyperlinks to jump to the lesson videos.

Unit 4 Lesson 2-3a: Proportion Method



Name:

Date: _____

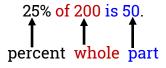
Model

Percents & Proportion Method

$$\frac{\text{part (is)}}{\text{whole (of)}} = \frac{\text{percent (\%)}}{100}$$

All percent problems have 3 unknowns: the percent (%), the part(is), or the whole (of).

Identify these in order to solve the problem.



Example:

Label the known parts and set up the proportion. Do not solve. The unknown becomes the variable (x).

$$\frac{x}{78} = \frac{7}{100}$$

Structured Guided Practice

Directions: Set up the proportion. Do not solve.

Unit 4 Lesson 2-3a: Proportion Method



Student Practice

Directions: Set up the proportion. Do not solve.

1	72% of 54 is	2
1.	12% 01 54 IS	•

2. 85% of 38 is _____?

4. What _____% is 24 of 38?

6. What _____% is 53 of 216?

Unit 4 Lesson 2-3b Calculating Percent of Decimals



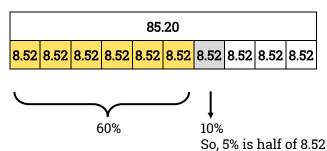
Name:	
manne.	

Date: _____

Model

65% of 85.20

1. Divide the whole into 10 equal parts. Each part represents 10%.



2. Calculate:

60% is
$$8.52 \times 6 = 51.12$$

5% is
$$8.52 \div 2 = 4.26$$

3. Add 60% plus 5%:

Structured Guided Practice

1.	65%	of	38	
----	-----	----	----	--

Unit 4 Lesson 2-3b: Calculating Percent of Decimals

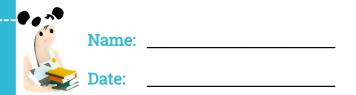


Student Practice

Directions: Use a bar graph to calculate percent.

1. 15% of 56.20	2. 70% of 78.60
3. 25% of 22.60	4. 30% of 88.40
5. 85% of \$27.00	6. 60% of \$64.20

Extra Practice Unit 4 · Lessons 1 & 2: Percent Discount



Directions: Calculate the discount or the original price.

- 1. A laptop that originally cost \$2000 is on sale for 55% off. What is the sale price of the laptop? What was the amount of the discount?
- 2. Andy bought a television that was on sale for \$1270.75. If the original price was cut by 35% what was the original price?

- 3. Sandra gave her customers a 10% discount for their meal on every first Thursday of the month. If Ken paid \$35.10 for his meal with the discount how much was his meal without the discount?
- 4. The steak dinner at a restaurant is on sale for 15% off. If the dinner originally cost \$45, what is the sale price? What is the amount of the discount?

- 5. Millie waited for a big sale to buy her new washing machine. In the newspaper, she found a coupon for 45% off the washer she wanted. If the original price of the washing machine was \$750, will she be able to purchase it with \$400? What will be the sale price?
- 6. Sally wants to buy a new phone that costs \$600. If she has a coupon for 20% off, how much will her phone cost after the discount has been applied?

- 7. Victor bought his jeans on sale for \$60. The sale was 25% off. What was the original price of the jeans?
- 8. A pack of soda usually costs \$4.60 but was on sale for 50% off. What was the sale price of the soda?

Unit 4 Lesson 4: Convert Percent & Decimals



Name:

Date: _____

Model

Percent to Decimal

24.5%

Divide by 100 to get a decimal.

Move decimal 2 places to the left.

Decimal to Percent

.845

Multiply by 100 to make a percent Move decimal 2 places to the <u>right</u>.

Note:

- Percent means "parts per hundred"
- Always multiply or divide by 100.
- Think about the two circles in the percent symbol (%)...

It is a reminder to move two decimal places.

Move left to divide.

Move right to multiply.

Structured Guided Practice

Directions: Convert into a decimal or percent.

1. 34.6%

2. .757

Re-Engage
Unit 4 Lesson 4: Convert Percent & Decimals



Student Practice

Directions: Convert into a decimal or percent.

1. 72.4%	2318
3. 24.5%	4294
5. 45.2%	6. 3.56
5. 4 5.2%	0. 3.30

Extra Practice Unit 4 · Lessons 3 & 4: Percent Markup



Directions: Read and solve.

- 1. Nathan is buying a camera that regularly costs \$400.00. It is on sale for 25% off. If the tax rate is 10%, what is the final cost of the camera?
- 2. Levon bought roses at the wholesale flower shop. If each dozen cost him \$4.50, what should his price be (at his flower shop) if he wants to make an 90% profit?

- 3. Terry's car needs new tires. If the tires cost \$880.00 for a set of 4 and the shop charges a 15% installation fee. How much will the total be for the tires and the installation?
- 4. A new tablet, regularly priced at \$550, is on sale for 20% off. Maya decides to purchase the tablet, which includes a 10% tax. Will Maya have enough money to buy the tablet with \$500? What will be the total including tax?
- 5. Jeremy bought a robot for \$400. If Jeremy had a 30% off coupon, and the tax was 10%, how much did he pay for the robot?
- 6. Carmen bought a graphing calculator for \$40. She sold it and made an 85% profit. How much did she sell the calculator for and what was the amount of her profit?

- 7. A discount store bought t-shirts for \$2.50 each. If they want to make a 70% profit when they resell them, how much should they ask for each t-shirt at the discount store?
- 8. Ali's Café is having a sale on muffins; buy one dozen for \$20 and get 45% off the second dozen. How much will the second dozen cost? How much will you pay for both dozens if there is an 8% tax fee to include?

Unit 4 Lesson 5: Find Percent Using a Calculator



Name:	
- 1022201	

Date: _____

Model

15% commission on sale of \$4,500

38.5% off a shirt that costs \$19.99

Convert 15% to a decimal:

15% = .15

Multiply using a calculator:

 $.15 \times 4500 = 675$

Answer:

\$675 is the commission for the sale.

Convert 38.5% to a decimal:

38.5% = 0.385

Multiply using a calculator:

 $0.385 \times 19.99 =$

Answer:

\$7.70 will be subtracted from the original price. *Remember to round to the nearest hundredth when calculating money.

Structured Guided Practice

Directions: Solve using a calculator.

- 1. 25% commission on sale of \$7,500
- 2. 15% commission on sale of \$12,700

- 3. 65.9% off a pair of shoes that cost \$39.99
- 4. 26.5% off a wallet that costs \$9.99

Unit 4 Lesson 5: Find Percent Using a Calculator



Student Practice

Directions: Solve using a calculator.

1. 45% commission on sale of \$8,300	2. 30% commission on sale of \$1,200
3. 20% commission on sale of \$5,400	4. 15.7% off a bicycle that cost \$89.98
5. 75.2% off a sofa that costs \$939.99	6. 35.9% off a phone that costs \$699.99



Date:

Model

Cross Multiply to Solve Proportions

$$\frac{5}{8} \frac{x}{100}$$

$$5 \times 100 = 8 \times x$$

$$500 = 8x$$

Divide both sides by 8.

$$62.5 = x$$

Structured Guided Practice

Directions: Solve for x.

1.
$$\frac{3}{8} = \frac{x}{100}$$

2.
$$\frac{4}{5} = \frac{x}{100}$$

3.
$$\frac{6}{x} = \frac{5}{100}$$

4.
$$\frac{8}{x} = \frac{20}{100}$$

SWUN MATH

DEVELOPING MATH MINDS FOR TOMORROW



Student Practice

Directions: Solve for x.

1.
$$\frac{4}{16} = \frac{x}{100}$$

2.
$$\frac{5}{8} = \frac{x}{100}$$

3.
$$\frac{7}{14} = \frac{x}{100}$$

4.
$$\frac{9}{x} = \frac{40}{100}$$

5.
$$\frac{3}{x} = \frac{75}{100}$$

6.
$$\frac{2}{x} = \frac{50}{100}$$

Extra Practice

Unit 4 · Lessons 5, 6, & 7: Commissions, Fees, Taxes & Tips



Directions: Calculate the commissions, fees, tax and/or tip. Round to the nearest penny.

- 1. The motorcycle repair shop charged Dylan \$56 plus a 20% labor fee. How much did Dylan have to pay?
- 2. A movie purchased online was \$6.00, but the online movie-streaming company charged a 25% service charge for providing it to its customers. How much did the online movie-streaming company collect for the movie?
- 3. What is the amount of tax on a pair of shoes that cost \$75.00, if the tax rate is 9%?
- 4. The mobile carwash charges \$105 for a detail, including wax and polish. The detailers charge a 20% commission to the company for doing the work. How much does the company get to keep?
- 5. How much tip would you give a driver who charged you \$15.60, and you wanted to tip him 10%?
- 6. Tammy received a commission of \$18,150.00 this week for a sale of \$605,000. Find the rate of commission.

- 7. Omar sold a car for \$28,000. If he earned a 12% commission on the sale, how much money did he make?
- 8. What would your total cost be on a pair of sunglasses that cost \$125.00 pre-tax, and the tax was 9%?

Unit 4 Lesson 10-11: Percent of Change



Date:

Model

Percent of Change

$$\frac{Amount \ of \ change}{\text{Original}} = \% \ \text{Change}$$

- 1. Decide if it is an increase or decrease.
- 2. Find the difference between the original and new amounts. (*Amount of change*)
- 3. Divide by the original.
- 4. Convert to a % by multiplying by 100.

Examples:

The temperature changed from 50 to 80 degrees.

$$\frac{80 - 50}{80} = \frac{37.5\%}{\text{Change}}$$

- 1. Increase
- 2. $80^{\circ} 50^{\circ} = 30^{\circ}$
- $3. 30 \div 80 = .375$
- 4. 37.5% increase

Structured Guided Practice

Directions: Find the percent of change. Circle increase or decrease.

- 1. The salary went from \$24,000 to \$45,000.
- 2. The price of a table went from \$1,400 to \$500.

_____% increase/decrease

% increase/decrease

Unit 4 Lesson 10-11: Percent of Change



Student Practice

Directions: Find the percent of change. Circle increase or decrease.

 The entrance cost was 0.60 cents per person. Two years later the cost went to \$3.60 per person. 	2. School lunch was \$1.25 in 1975. In 2010, the cost of lunch is \$3.50.
% increase/decrease	% increase/decrease
3. The house was bought for \$300,000 and sold later for \$495,000.	4. The small pool had 500 gallons of water. After summer swimming, it had 460 gallons of water.
% increase/decrease	% increase/decrease
5. The enrollment at summer camp went from 115 to 85 students.	6. A \$30 shirt was on sale for \$24.
% increase/decrease	% increase/decrease

Extra Practice

Unit 4 · Lessons 10 & 11: Percent of Change



Directions: Read and solve.

- 1. A sweatshirt had an original price of \$50 and is on sale for \$34. What is the percent of change in price?
- 2. The owner of a local convenience store increased his order of candy bars from 75 cases to 90 cases. What is the percent of increase in the amount of cases he ordered?
- 3. A water park will need to decrease its maximum guest capacity by 20% to be able to build a new water feature. If the current maximum guest capacity is 30,000, by how many guests will it need to decrease to build the new attraction?
- 4. The temperature was 50° at 12 pm. By 6 pm, the temperature had dropped to 20°. Find the percent of decrease in temperature.

- 5. The enrollment in summer camp went from 125 people to 160 people in the last year. What was the percent of increase in enrollment?
- 6. Janice received a score of 60 points on her last math test. She needs to increase her score by at least 33% to play in the next soccer game. Identify the minimum score Janice needs to have to play in the next game.
- 7. In the late 1800 the life expectancy of an American was about 40 years. Today the life expectancy of an American is about 78 years. What is the percentage growth in the life expectancy of an American?
- 8. On Sunday, the overnight temperature was 32°. A week later the overnight temperature increased to 36°. What was the increase in temperature in percentage?



Name:			

Date: _____

Model

Group Like Terms

A **term** is a number, variable or product of numbers and variables.

Like terms:

- · same variables with same exponent
- constants (numbers)

Like Terms 3x and 2x		5 and 1.5	$6x \text{ and } \frac{6}{x}$		
Unlike Terms	3x² and 2x	5a and 5b	6 and x		

Note:

exponents are different

variables are

one is a constant and one is a variable

- x is the same as 1x
- coefficients do not have to be the same
- the sign stays with the number or variable after it

Example:

$$-2x + 5 + 7x + x + 3 + 3x^{2} = -2x + 7x + x + 5 + 3 + 3x^{2}$$

Structured Guided Practice

Directions: Rewrite the expression by grouping like terms.

1.
$$-2 - 3x + 2x + 5x^3 + 4$$

2.
$$x + 7 + 2x + 4x^2 + 2$$

Unit 5 Lesson 1: Group Like Terms



Student Practice

Directions: Rewrite the expression by grouping like terms.

1.
$$-3 - 4x + 2x^3 + 6x + 2$$

2.
$$5 + 3x + x^2 + 4x^2 + 1$$

3.
$$4 + x^2 + 3x + x + 2$$

4.
$$2 + 5x + 4x^3 + 2x + 3$$

5.
$$x + 9 + x^3 + 2x + 4x + 5 + 7x^2$$

6.
$$3x^3 + 2x + 4x^3 + x + 4 + 8x + 10$$

Integers: Addition Fluency A (70 items)

Name_____ Date____

-6 + 8 =	-7 + 5 =	-6 + -6 =	4 + -7 =	-3 + 2 =	6 + -7 =	8 + -4 =
-5 + -5 =	-5 + -4 =	-9 + 8 =	-6 + -4 =	-4 + -3 =	3 + -4 =	-2 + -3 =
-6 + -2 =	-7 + 5 =	-8 + -3 =	-5 + 7 =	-2 + -9 =	-2 + -5 =	0 + 6 =
5 + -9 =	7 + -9 =	-6 + 1 =	-4 + -8 =	-2 + 4 =	-8 + -9 =	4 + -4 =
−7 + −1 =	-7 + -7 =	-2 + 6 =	−7 + −8 =	-3 + -7 =	-9 + 6 =	-9 + 4 =
-2 + -2 =	7 + -6 =	-8 + 5 =	8 + -7 =	-5 + 6 =	-6 + -5 =	-5 + 4 =
-3 + -6 =	8 + -2 =	7 + -4 =	9 + -3 =	-9 + 2 =	5 + -3 =	8 + -1 =
-4 + 9 =	-7 + 3 =	-4 + -5 =	-9 + -5 =	-3 + 3 =	-2 + -8 =	-4 + 2 =
-9 + -4 =	-7 + -2 =	-9 + 1 =	4 + -9 =	3 + -8 =	−3 + −5 =	-9 + 9 =
6 + -3 =	-2 + 7 =	-9 + -7 =	-4 + -6 =	-5 + 8 =	-8 + 6 =	-8 + 9 =

Integers: Subtraction
Fluency A
(70 items)

Name_____ Date____

-66 =	-62 =	67 =	-29 =	-4 + -6 =	-2 - 4 =	-9 - 8 =
-48 =	34 =	-76 =	-83 =	-37 =	52 =	76 =
-35 =	-55 =	-97 =	79 =	-64 =	-6 - 8 =	-23 =
-77 =	-5 - 7 =	-9 - 6 =	0 - 6 =	-8 - 5 =	-6 - 9 =	-5 - 4 =
44 =	88 =	93 =	-78 =	81 =	-3 - 2 =	-43 =
88 =	84 =	-9 - 9 =	−7 − −5 =	-9 - 1 =	-8 - 6 =	-28 =
-2 - 7 =	-7 - 3 =	38 =	-9 - 2 =	39 =	-45 =	-94 =
-5 - 6 =	-95 =	-2 - 2 =	61 =	-65 =	-89 =	74 =
-2 - 6 =	53 =	-9 - 4 =	82 =	27 =	-4 - 2 =	-36 =
59 =	-25 =	63 =	-4-9=	-5 - 8 =	-3 - 3 =	47 =

Integers: Multiplication
Fluency A
(70 items)

Name______Date____

−2·−5 =	-6 ⋅3 =	4 · -2 =	−8 · 7 =	-5·-5 =	-3·-5 =	$-4 \cdot 7 =$
3 ⋅ −3 =	-8 · 2 =	−7·−1 =	-8 ⋅ 2 =	-2·-9 =	-8 · -3 =	2 · -6 =
9 · -8 =	-6 · 1 =	$-5\cdot 3 =$	−3 · 9 =	-6·-5 =	-9 · -5 =	-4 · -5 =
-8 ⋅8 =	-2·-8 =	9 · -1 =	-8 · 4 =	8·-5 =	6 · -8 =	<i>-</i> 7 · <i>-</i> 7 =
-2 · -3 =	-9 ⋅3 =	-7·−8 =	$-4 \cdot 4 =$	5·-4 =	8 · -6 =	-6·−2 =
-4 · -6 =	9 · -2 =	6 · -4 =	$-7 \cdot 4 =$	-4·-8 =	-6 ⋅ 7 =	<i>-</i> 3 · <i>-</i> 7 =
$-3 \cdot 4 =$	-7·-2 =	-6 ⋅ -6 =	-9 · -7 =	$-7\cdot 9 =$	-3·−6 =	−5 · 9 =
4·−9 =	5·−8 =	9 · -6 =	2 · -7 =	2 · -4 =	$-7 \cdot 6 =$	−8 · 1 =
2·-2=	6 · -9 =	5·-7 =	0 · 9 =	-6·-4 =	8 · -8 =	-7·-5 =
3 ⋅ −2 =	-4 · -3 =	-9·-4 =	5 · -6	7 · -3 =	-3 ⋅ 8 =	−5 · 2 =

Integers: Division
Fluency A
(70 items)

Name_____ Date____

$-27 \div -9 =$	15 ÷ −3 =	-14 ÷ 7 =	16 ÷ −2 =	$-32 \div -4 =$	56 ÷ −8 =	$-15 \div -5 =$
$36 \div -6 =$	-12 ÷ 2 =	-48 ÷ 6 =	$-72 \div -8 =$	$-25 \div -5 =$	0 ÷ -6 =	$-24 \div -8 =$
$-45 \div -5 =$	$-45 \div -9 =$	$-21 \div -3 =$	-28 ÷ 7 =	$-35 \div -5 =$	6 ÷ -6 =	49 ÷ -7 =
12 ÷ −4 =	-81 ÷ −9 =	$-9 \div 3 =$	$-24 \div -3 =$	$-30 \div 5 =$	21 ÷ -7 =	$-64 \div 8 =$
$-27 \div -9 =$	-63 ÷ 9 =	−12 ÷ −6 =	$-6 \div 2 =$	-4 ÷ 2 =	$-63 \div -7 =$	$-20 \div -4 =$
−32 ÷ 8 =	72 ÷ -9 =	$-24 \div -6 =$	-10 ÷ 2 =	-48 ÷ −6 =	16 ÷ −8 =	-28 ÷ 4 =
-48 ÷ 8 =	10 ÷ −5 =	$-12 \div -3 =$	$-36 \div 9 =$	−9 ÷ −9 =	$-36 \div 9 =$	$-42 \div -7 =$
$-7 \div -7 =$	8 ÷ −2 =	$-16 \div -4 =$	$-40 \div -8 =$	-24 ÷ 4 =	56 ÷ −7 =	-18 ÷ 6 =
54 ÷ -9 =	$-5 \div 5 =$	$18 \div -3 =$	$20 \div -5 =$	8 ÷ -8 =	$-56 \div -8 =$	$-15 \div -5 =$
8 ÷ -4 =	$-6 \div -3 =$	$-40 \div 5 =$	$35 \div -7 =$	18 ÷ −9 =	-18 ÷ −2 =	36 ÷ −4 =

Fraction/Decimal
Conversion A
(70 items)

Name D)ate
--------	------

Directions: Convert fractions to decimals and decimals to fractions.

$\frac{5}{10} =$	0.4 =	0.63 =	$\frac{17}{100}$ =	$\frac{1}{2}$ =	0.9 =	$\frac{4}{5}$ =	$\frac{31}{100}$ =	0.83 =	0.01 =
$\frac{1}{4}$ =	0.2 =	$\frac{2}{3}$ =	0.1 =	0.59 =	$\frac{8}{10} =$	0.65 =	$\frac{1}{5}$ =	$\frac{27}{100}$ =	$\frac{8}{25} =$
0.99 =	$\frac{13}{20} =$	0.37 =	$\frac{57}{100}$ =	$\frac{1}{3}$ =	0.7 =	$\frac{83}{100} =$	0.04 =	$\frac{2}{10} =$	0.6 =
0.2 =	$\frac{14}{20} =$	0.09 =	$\frac{3}{10} =$	0.85 =	$\frac{3}{5} =$	$\frac{9}{10} =$	$\frac{93}{100}$ =	0.45 =	0.5 =
$\frac{74}{100}$ =	$\frac{23}{50} =$	0.75 =	0.25 =	$\frac{18}{50} =$	0.1 =	$\frac{1}{2}$ =	0.8 =	0.35 =	$\frac{19}{20}$ =
0.79 =	$\frac{22}{25} =$	$\frac{37}{50} =$	$\frac{72}{100}$ =	0.2 =	0.02 =	$\frac{7}{10} =$	$\frac{12}{20}$ =	0.95 =	0.3 =
0.8 =	0.04 =	$\frac{18}{25} =$	0.08 =	$\frac{44}{50}$ =	0.9 =	$\frac{53}{100}$ =	0.15 =	$\frac{1}{10} =$	$\frac{1}{100} =$