

Name: _____ Date: _____ Period: _____

WS "Operations of Decimals" #1

1) $.29 + 83 + 6.75$	2) $41.6 + .416 + 416$	3) $.4 + .4 + .4$	4) $.07 + .007 + .7 + 1.223$
5) $18.7 - 1.87$	6) $3 - .8347$	7) $29.5 - 17.68$	8) $100 - 65.018$
9) $.34 \times 5.8$	10) $.5 \times .3 \times .5$	11) 27×0.94	12) $1.51 \times .60000$
13) $.08 \overline{)216}$	14) $26 \overline{)1.326}$	15) $3.4 \overline{)2.754}$	16) $0.728 \div 0.13$
17) $32 \overline{).10912}$	18) $.59 \overline{)3245}$	19) $.91 \overline{)873.6}$	20) $2 \div .005$

OVER \longrightarrow

	Fraction	Decimal	Percent	Work Space
21)		0.25		
22)	$2\frac{3}{4}$			
23)		0.8		
24)	$\frac{1}{3}$			
25)		0.46		
26)	$\frac{7}{8}$			

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WS "Operations of Decimals" #2

1) $.9 + .5 + .7$	2) $.9 + .09 + .009 + .001$	3) $8596 + .2074$	4) $36.524 + 18 + 3.6524$
5) $20.02 - 4.004$	6) $2 - .6357$	7) $60.94 - 4.897$	8) $4 - 1.6905$
9) $.4 \times .4 \times .4$	10) $.2 \times .2 \times .02$	11) $.063 \times 7.45$	12) 000.9×9.000
13) $.85 \overline{) 2.6605}$	14) $92 \overline{) 3.036}$	15) $128 \overline{) 46.208}$	16) $2 \div 0.04$
17) $2.12 \overline{) 13.144}$	18) $46 \overline{) 20.608}$	19) $.75 \overline{) .00225}$	20) $0.04 \div 2$

OVER \longrightarrow

	Fraction	Decimal	Percent	Work Space
21)		0.625		
22)	$6\frac{1}{2}$			
23)		0.12		
24)	$\frac{2}{3}$			
25)		0.65		
26)	$\frac{1}{8}$			

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WS "Stilwell Practice 7-2" #1

1) N is 50% of 86	2) 10% of 320 is M	3) 75% of 96 is H	4) R is $33\frac{1}{3}\%$ of 12	5) T is 41% of 90
6) 28 is $M\%$ of 50	7) 27 is $R\%$ of 60	8) $K\%$ of 24 is 18	9) 8 is $N\%$ of 64	10) 12 is $X\%$ of 96
11) 20% of A is 18	12) 54 is 36% of X	13) 84 is 75% of T	14) 12 is $66\frac{2}{3}\%$ of N	15) 9 is 37.5% of R
16) X is 25% of 96	17) 32 is $N\%$ of 80	18) 21 is 15% of T	19) Y is 99% of 80	20) 7 is $R\%$ of 21

OVER \longrightarrow

	Fraction	Decimal	Percent	Work Space
21)	$\frac{1}{4}$			
22)		0.9375		
23)			64%	
24)	$\frac{7}{12}$			
25)			$6\frac{1}{4}\%$	
26)			$4\frac{1}{6}\%$	
27)	$\frac{7}{8}$			
28)		1.7		

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WS "Stilwell Practice 7-2" #2

1) N is 75% of 84	2) R is $33\frac{1}{3}\%$ of 87	3) X is 37.5% of 88	4) 85% of 120 is Y	5) $8\frac{1}{3}\%$ of 36 is W
6) 19 is $N\%$ of 38	7) 14 is $R\%$ of 21	8) $X\%$ of 80 is 34	9) $Y\%$ of 75 is 39	10) 12 is $W\%$ of 72
11) 13.5 is 50% of N	12) 7 is $16\frac{2}{3}\%$ of R	13) 12.5% of X is 9	14) 69 is 46% of Y	15) $41\frac{2}{3}\%$ of W is 15
16) N is $11\frac{1}{9}\%$ of 72	17) 5 is $R\%$ of 7	18) 3 is $7\frac{1}{7}\%$ of X	19) $Y\%$ of 50 is 26	20) N is 100% of $\frac{5}{13}$

OVER \longrightarrow

	Fraction	Decimal	Percent	Work Space
21)		0.25		
22)			$66\frac{2}{3}\%$	
23)	$\frac{3}{8}$			
24)		0.6		
25)			2.5%	
26)	$\frac{1}{12}$			
27)		0.95		
28)	$2\frac{1}{5}$			
29)			100%	

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WS "Stilwell Practice 7-2" #3

1) R is 9.6% of 50	2) 47 is 50% of T	3) 29 is $X\%$ of 116	4) 196 is 56% of N	5) 17 is $B\%$ of 51
6) K is $6\frac{1}{4}\%$ of 176	7) 80 is $66\frac{2}{3}\%$ of Y	8) 13.5 is $A\%$ of 27	9) R is 4.3% of 4.3	10) 31 is $33\frac{1}{3}\%$ of S
11) 4.913 is $N\%$ of 4.913	12) $X\%$ of 42 is 7	13) 100% of N is 5.082	14) T is 75% of $\frac{2}{3}$	15) $\frac{1}{2}$ is $Y\%$ of $\frac{1}{4}$
16) What is 12.5% of 64?	17) 17 is what% of 34?	18) 12 is what% of 18?	19) 26 is 40% of what?	20) 45 is $37\frac{1}{2}\%$ of what?

OVER \longrightarrow

	Fraction	Decimal	Percent	Work Space
21)	$\frac{1}{2}$			
22)			220%	
23)		0.004		
24)	$\frac{5}{8}$			
25)			6%	
26)			$16\frac{2}{3}\%$	
27)	$\frac{5}{6}$			
28)		0.025		
29)	$\frac{2}{3}$			
30)		0.8		

7-6**Study Guide and Intervention****Percent of Change**

A **percent of change** is a ratio that compares the change in quantity to the original amount. If the original quantity is increased, it is a **percent of increase**. If the original quantity is decreased, it is a **percent of decrease**.

Example 1 Last year, 2,376 people attended the rodeo. This year, attendance was 2,950. What was the percent of change in attendance to the nearest whole percent?

Since this year's attendance is greater than last year's attendance, this is a percent of increase.

The amount of increase is $2,950 - 2,376$ or 574.

$$\begin{aligned} \text{percent of increase} &= \frac{\text{amount of increase}}{\text{original amount}} && \leftarrow \begin{array}{|l|} \hline \text{new amount} - \\ \text{original amount} \\ \hline \end{array} \\ &= \frac{574}{2,376} && \text{Substitution} \\ &\approx 0.24 \text{ or } 24\% && \text{Simplify.} \end{aligned}$$

Rodeo attendance increased by about 24%.

Example 2 John's grade on the first math exam was 94. His grade on the second math exam was 86. What was the percent of change in John's grade to the nearest whole percent?

Since the second grade is less than the first grade, this is a percent of decrease. The amount of decrease is $94 - 86$ or 8.

$$\begin{aligned} \text{percent of decrease} &= \frac{\text{amount of decrease}}{\text{original amount}} && \leftarrow \begin{array}{|l|} \hline \text{original amount} - \\ \text{new amount} \\ \hline \end{array} \\ &= \frac{8}{94} && \text{Substitution} \\ &\approx 0.09 \text{ or } 9\% && \text{Simplify.} \end{aligned}$$

John's math grade decreased by about 9%.

Exercises

Find each percent of change.

State whether the percent of change is an *increase* or *decrease*.

1. original: 4
new: 5

2. original: 1.0
new: 1.3

3. original: 15
new: 12

4. original: \$30
new: \$18

5. original: 60
new: 63

6. original: 160
new: 136

7. original: 7.5
new: 10.5

8. original: 9.6
new: 6

7-6**Skills Practice****Percent of Change**

Find each percent of change.

State whether the percent of change is an *increase* or *decrease*.1. original: 35
new: 702. original: 8
new: 123. original: 45
new: 304. original: \$400
new: \$4505. original: \$75
new: \$606. original: 250
new: 1007. original: \$80
new: \$1108. original: 35
new: 289. original: \$12.50
new: \$1510. original: 80
new: 5211. original: 45
new: 6312. original: 120
new: 13213. original: \$210
new: \$10514. original: 84
new: 11215. original: \$80
new: \$10016. original: 6.8
new: 8.217. original: 1.5
new: 2.518. original: 90
new: 7219. original: \$400
new: \$35020. original: \$80
new: \$12021. original: 144
new: 10822. original: 20.8
new: 1323. original: \$75
new: \$1524. original: 8
new: 7.2

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WS "Stilwell Study Guide 7-7"

Use the information to fill in the chart. Write a proportion and solve.

1) There are 500 students at a school. 55% are girls. How many are girls?

		%
		%
		100 %

$$\underline{\quad} = \underline{\quad}$$

2) There are 30 students in a class. 18 are boys. What percent are boys?

		%
		%
		100 %

$$\underline{\quad} = \underline{\quad}$$

3) There are 120 problems on a test. How many do you need for 95% correct?

		%
		%
		100 %

$$\underline{\quad} = \underline{\quad}$$

4) The Tiger Football team won 10 games and lost 5 games. What percent are wins?

		%
		%
		100 %

$$\underline{\quad} = \underline{\quad}$$

5) Lolo bakes 38 snickerdoodles for her Olympic team.

19 cookies were burnt. What percent of the cookies were edible?

		%
		%
		100 %

$$\underline{\quad} = \underline{\quad}$$

OVER →

6) The basketball player was shooting free throws.
He made 68 and missed 12. Find the percent made.

		%
		%
		100 %

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

7) There are 120 problems on a test. You missed 45 problems.
What percent of the problems did you get correct?

		%
		%
		100 %

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

8) In the 7th grade, you played 125 four-square games. You were King 12% of the time.
How many times were you King?

		%
		%
		100 %

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

9) The photographer took a plethora of pictures for the Stilwell Mimes show.
12 were fuzzy and 84 were great. What percent were fuzzy?

		%
		%
		100 %

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

10) There are 90 problems on a test. You get 60 problems correct. Find the percent missed.

		%
		%
		100 %

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

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WS "Stilwell Skills Practice 7-7"

Use the information to fill in the chart. Write a proportion and solve.

1) Regular Price is \$10 Sale Price is \$7

Find the amount of discount. _____

Find the percent of discount. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

2) Regular Price is \$36 Sale Price is \$24

Find the amount of discount. _____

Find the percent of discount. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

3) Regular Price is \$24 Reduced by \$8

Find the sale price. _____

Find the percent of discount. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

4) Regular Price is \$128 Reduced by \$32

Find the sale price. _____

Find the percent of discount. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

5) Sales Tax is 3% The cost is \$17

Find the tax. _____

Find the total amount. _____

6) Sales Tax is 5% The price is \$60

Find the tax. _____

Find the total amount. _____

7) Reduced by 75% Sale Price is \$40

Find the regular price. _____

Find the discount. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

8) Save 40% Discount is \$80

Find the regular price. _____

Find the sale price. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

9) Sale Price is \$170 Save 15%

Find the regular price. _____

Find the discount. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

10) Discount is $33\frac{1}{3}\%$ Now pay \$24

Find the regular price. _____

Find the discount. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

11) Sales Tax is 3% The cost is \$92

Find the tax. _____

Find the total amount. _____

12) Sales Tax is 6% The price is \$8

Find the tax. _____

Find the total amount. _____

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WS "Stilwell Practice 7-7"

Use the information to fill in the chart. Write a proportion and solve.

1) A shirt is regularly \$35. Discount is 40%.

Find the amount of discount. _____

Find the sale price. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

2) Sale Price is \$35. Discounted 30%.

Find the "sale price" percent. _____

Find the regular price. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

3) After taking a math test, you got 56 correct and 14 wrong.

Find the percent correct. _____

		%
		%
		100 %

_____ = _____

4) In a class, there are 11 boys and 14 girls.

Find the percent of boys. _____

		%
		%
		100 %

_____ = _____

5) A shirt is \$21 Sales tax is 3%

Find the tax. _____

Find the total amount. _____

6) Sales Tax is 6% The price is \$75

Find the tax. _____

Find the total amount. _____

OVER →

7) A cell phone is \$80. Sale price is \$52.

Find the percent of the discount. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

8) There are 175 students at a school.
56% are girls.

How many students are girls? _____

		%
		%
		100 %

_____ = _____

9) Regular price for shoes is \$70.
Discount is 40%.

How much money do you save? _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

10) Regular price for a textbook is \$60.
There is a 25% discount.
Sales tax is 6%.

Find the final cost. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

11) Sales Tax is 6% The price is \$79

Find the tax. _____

Find the total amount. _____

12) You earned \$96 babysitting.
You spend 25% at the movie theatre.
Then, you spend 25% of what was left on
a new shirt.

How much money is left? _____

7-8**Skills Practice**

Simple Interest : Calculator OK, but show : formula substitution answer

* Find the interest earned to the nearest cent for each principal, interest rate, and time.

1. \$500, 4%, 2 years

2. \$350, 6.2%, 3 years

3. \$740, 3.25%, 2 years

4. \$725, 4.3%, $2\frac{1}{2}$ years5. \$955, 6.75%, $3\frac{1}{4}$ years

6. \$1,540, 8.25%, 2 years

7. \$3,500, 4.2%, $1\frac{3}{4}$ years

8. \$568, 16%, 8 months

* Find the interest paid to the nearest cent for each loan balance, interest rate, and time.

9. \$800, 9%, 4 years

10. \$280, 5.5%, 4 years

11. \$1,150, 7.6%, 5 years

12. \$266, 5.2%, 3 years

13. \$450, 22%, 1 year

14. \$2,180, 7.7%, $2\frac{1}{2}$ years15. \$2,650, 3.65%, $4\frac{1}{2}$ years

16. \$1,245, 5.4%, 6 months

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Chapter 7: Applying Percents

Bringing It All Together #1

Vocabulary Check

State whether the statement is *true* or *false*.

If *false*, replace the underlined word or number to make a true sentence.

- 1) The sale price of a discounted item is the regular price minus the discount. _____
- 2) A ratio that compares the change in quantity to the original amount is called the percent of change. _____
- 3) A percent proportion compares part of a quantity to the whole quantity using a percent. _____
- 4) The formula for simple interest is $I = prt$. _____
- 5) A tax is the amount by which the regular price of an item is reduced. _____
- 6) To find the percent of increase, compare the amount of increase to the new amount. _____
- 7) If the new amount is greater than the original amount, then the percent of change is "percent of decrease." _____
- 8) The principal is the amount of money deposited or borrowed. _____

7-2 The Percent Proportion (p. 350-354)

Set up a proportion and solve. Show your work!

9) 75% of 96 is H	10) 7 is $R\%$ of 21	11) $K\%$ of 24 is 18
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OVER →

12) R is $33\frac{1}{3}\%$ of 12

13) 12 is $66\frac{2}{3}\%$ of N

14) 8 is $N\%$ of 64

7-6 Percent of Change (p. 369-374)

Find each percent of change.

State whether the percent of change is an *increase* or *decrease*.

15) original: 4
new: 5

16) original: 1.0
new: 1.3

17) The price was \$15.
Now it is \$12.

18) Mr. Johnson ran 7.5 km on Monday
and then 6 km on Tuesday.

7-7 Sales Tax and Discount (Percent Story Problems) (p. 375-378)

Find the sales tax. Then, find the total amount.

19) \$25 backpack; 7% tax

20) \$8,000 car; 5.5% tax

OVER 

Use the information to fill in the chart. Write a proportion and solve.

21) A bike is regularly \$45.
There is a 30% discount.
Find the amount of discount. _____
Find the sale price. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

22) In a class, there are 36 boys and 39 girls.
Find the total number of students. _____
What percent are girls? _____

		%
		%
		100 %

_____ = _____

23) The basketball player was shooting free throws. She made 54 and missed 6.
Find the total number of free throws. _____
Find the percent made. _____

		%
		%
		100 %

_____ = _____

24) A phone is discounted 40%.
The regular price is \$60.
Sales tax is 6%.
Find the sale price. _____
Find the total amount. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

7-8 Simple Interest (p. 379-382)

Find the interest earned to the nearest cent.

Show your formula, substitution and steps!. (Calculator ☺k)

25) \$779, 8%, 4 years

26) \$4,800, 2.4%, 3 months

Review of Fractions = Decimals = Percents

	Fraction	Decimal	Percent	Work Space
27)	$\frac{2}{3}$			
28)			1.25%	
29)		0.003		
30)		0.2		
31)	$\frac{4}{12}$			
32)			25%	
33)			$\frac{1}{4}\%$	
34)		5		
35)	$\frac{4}{5}$			
36)			$16\frac{2}{3}\%$	
37)	$\frac{13}{25}$			

FINALLY DONE



Name: _____ Date: _____ Period: _____

Chapter 7: Applying Percents

Bringing It All Together #2

Set up a proportion and solve. Show your work!

1) G is $66\frac{2}{3}\%$ of 48

2) $R\%$ is 45 of 81

3) 9 is 12.5% of N

4) 36 is 40% of T

5) $X\%$ of 42 is 7

6) 75% of 67 is W

Find each percent of change.

State whether the percent of change is an *increase* or *decrease*.

7) The price was \$180. Now it is \$126.

8) Mrs. Jones ran 8 minutes on Friday and then 9.2 minutes on Saturday.

OVER →

Use the information to fill in the chart. Write a proportion and solve.

9) A \$90 watch is now on sale for \$63.

What was the amount of discount? _____

What was the discount percent? _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

10) You missed 5 questions and answered 45 questions correct on your science test.

Find the total number of questions. _____

Find the percent correct. _____

		%
		%
		100 %

_____ = _____

11) There are 180 school days.
135 days have passed.

What percent of school is left? _____

		%
		%
		100 %

_____ = _____

12) A concert ticket was \$48.
There is a 25% discount.
Sales tax is 6%.

Find the sale price. _____

Find the total amount. _____

Sale Price		%
Discount		%
Regular Price		100 %

_____ = _____

Find the interest earned to the nearest cent.

Show your formula, substitution and steps!. (Calculator ☺k)

13) \$779, 8%, 4 years

14) \$4,800, 2.4%, 3 months

	Fraction	Decimal	Percent	Work Space
15)	$\frac{5}{6}$			
16)			3.75%	
17)		0.005		
18)		0.8		
19)	$\frac{5}{12}$			
20)			25%	
21)			$\frac{1}{4}\%$	
22)		2		
23)	$\frac{1}{5}$			
24)			$37\frac{1}{2}\%$	
25)	$\frac{18}{25}$			

FINALLY DONE

