

7th Grade  
Jan 6, 2021

Today we will:

- review yesterday's WS
- take in-class notes
- begin Skills WS

HOMEWORK:

Skills WS

THQ due FRIDAY

ALEKS assignment:  
60 min and 5 topics  
due Jan 12



**Independent Practice**

Go online for step-by-step solutions



Use the percent proportion to solve each problem. (Examples 1-3)

13. 4% of what number is 10? **250**

14. 55% of what number is 22? **40**

15. 21 is what percent of 50? **42%**

16. 16 is what percent of 64? **25%**

17. What percent of 145 is 52.2? **36%**

$$\left\{ \frac{52.2}{145} = \frac{P}{100} \right.$$

18. What percent of 36 is 19.8? **55%**

19. What is 60% of 120? **72**

20. What is 80% of 125? **100**

21. Find 65% of 440. **286**

22. Find 83% of 200. **166**

23. 12 is 40% of what number? **30**

24. 34 is 20% of what number? **170**

25. 80% of what number is 12? **15**

26. 4% of what number is 15? **375**

27. Sixteen of the 80 dogs at a kennel are golden retrievers. What percent of the dogs at the kennel are golden retrievers? (Example 4) **20%**

$$\frac{16}{80} = \frac{P}{100}$$

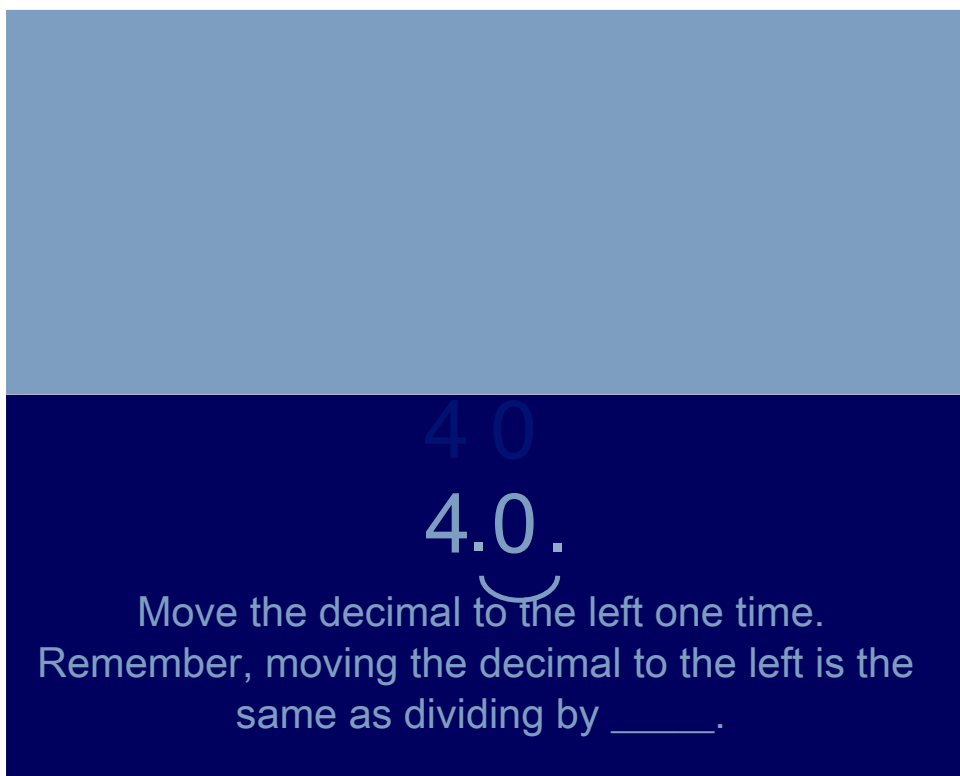
28. The number of lime-flavored gumballs in a gumball machine is 85. If this is 17% of the number of gumballs in the machine, how many gumballs are in the machine? (Example 4) **500 gumballs**

$$\frac{85}{X} = \frac{17}{100}$$

# Percent Patterns

The 10% Method!  
What is 10% of 40?

To answer this question, click the 40 and slowly drag it down.



40  
4.0.

Move the decimal to the left one time.  
Remember, moving the decimal to the left is the same as dividing by \_\_\_\_.

so 10% of 40 = 4.0 or 4



# Percent Patterns

The 10% Method!

What is 10% of 85?

To answer this question, click the 85 and slowly drag it down.

85

8.5.

Move the decimal to the left one time.  
Again, remember that moving the decimal to the left  
is the same as dividing by 10.

so 10% of 85 = 8.5



# Percent Patterns

The 10% Method!  
What is 10% of 37.7?

37.7  
3.77  
Move the decimal to the left one time.

so 10% of 37.7 = 3.77



# Percent Patterns

## The 10% Method!

Turn to a partner and discuss what you think the pattern is for finding 10% of any number...



# Percent Patterns

## The 10% Method!

Now it is your turn to try these on your own:

10% of 20=

10% of 30=

10% of 70=

10% of 120=

10% of 4.5=

10% of 62=



# Percent Patterns

## The 10% Method!

### In summary...

Why does the 10% method work?

- Turn to your partner and discuss!





# Percent Patterns

## The 10% Method!

Let's extend our thinking!

$10\% \text{ of } 40 =$

$5\% \text{ of } 40 =$

$20\% \text{ of } 40 =$

$45\% \text{ of } 40 =$

$60\% \text{ of } 40 =$

$100\% \text{ of } 40 =$



Hannah has a coupon for 20% off her entire clothing purchase. If the items she buys cost \$110 originally, how much will she save with her coupon?

Think: I can find 10%, then double it.

$$10\% \text{ of } \$110 \text{ is } 110 \div 10 = \$11$$

$$\text{so } 20\% = 2 \times 10\% = 2 \times 11 = \$22$$

Mr. Williams ordered 4 pizzas for a birthday party. The cost of the pizzas was \$57.96. He wants to tip the delivery person about 15%. What is a reasonable amount for the tip?

Think: \$57.96 is close to \$60.  
I can find 10%, then add half that.

$$10\% \text{ of } 60 \text{ is } 60 \div 10 = \$6$$

$$\text{so } 5\% = 10\% \div 2 \text{ so } 6 \div 2 = \$3$$

$$\text{Then add } 10\% + 5\% = 6 + 3 = \$9 \text{ tip}$$

## Estimate.

1 26% of 64

Think: 26% is close to 25%, which is  $\frac{1}{4}$

25% of 64

$$\frac{1}{4} \text{ of } 64 = \frac{1}{4} \times \frac{64}{1} = 16$$

2  $\frac{2}{3}$ % of 891

Think: 891 is close to 900.  
I can find 1%, then take  $\frac{2}{3}$  of that.

$$1\% \text{ of } 900 \text{ is } \frac{900}{100} = 9$$

$$\frac{2}{3} \text{ of } 9 = \frac{2}{3} \times \frac{9}{1} = 6$$

3 39% of 81

Think: 81 is close to 80.  
39% is close to 40%, ~~which is~~

$$10\% \text{ of } 80 = \frac{80}{10} = 8$$

$$40\% = 4 \times 10\% = 4 \times 8 = 32$$

4 120% of 51

Think: 51 is about 50.  
I know 100%, and I can find 20%.

$$100\% \text{ of } 50 = 50$$

$$10\% \text{ of } 50 = \frac{50}{10} = 5$$

$$+ 10\% \text{ of } 50 = \frac{50}{10} = 5$$

$$120\% \text{ of } 50 = 50 + 5 + 5 = 60$$





## Lesson 2 Skills Practice

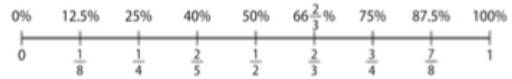
### Find Percent of a Number Mentally

Find the percent of each number mentally.

1. 10% of 582
2. 50% of 86
3. 40% of 1500
4. 20% of 75
5. 15% of 20
6. 80% of 45

#### Find Percent of a Number Mentally

The number line shows some common percent-fraction equivalents.



#### Concept Summary Percent-Fraction Equivalents

$25\% = \frac{1}{4}$	$20\% = \frac{1}{5}$	$10\% = \frac{1}{10}$	$12\frac{1}{2}\% = \frac{1}{8}$	$16\frac{2}{3}\% = \frac{1}{6}$
$50\% = \frac{1}{2}$	$40\% = \frac{2}{5}$	$30\% = \frac{3}{10}$	$37\frac{1}{2}\% = \frac{3}{8}$	$33\frac{1}{3}\% = \frac{1}{3}$
$75\% = \frac{3}{4}$	$60\% = \frac{3}{5}$	$70\% = \frac{7}{10}$	$62\frac{1}{2}\% = \frac{5}{8}$	$66\frac{2}{3}\% = \frac{2}{3}$
$100\% = \frac{1}{1}$	$80\% = \frac{4}{5}$	$90\% = \frac{9}{10}$	$87\frac{1}{2}\% = \frac{7}{8}$	$83\frac{1}{3}\% = \frac{5}{6}$

7. 30% of 120
8. 75% of 44
9. 5% of 40
10.  $33\frac{1}{3}\%$  of 99
11. 60% of 450
12.  $37\frac{1}{2}\%$  of 5
13. 25% of 480
14. 300% of 5
15. 150% of 82
16.  $66\frac{2}{3}\%$  of 210
17. 125% of 800
18. 175% of 400

Estimate.

19. 28% of 19
20. 55% of 32
21. 87% of 158
22. 35% of 544
23. 42% of 495
24. 19% of 319
25. 65% of 73
26. 8% of 224
27. 83% of 9
28. 17% of 331
29. 78% of 14
30. 12% of 879
31.  $\frac{1}{3}\%$  of 941
32.  $\frac{1}{2}\%$  of 376
33.  $\frac{1}{5}\%$  of 2052
34. 164% of 318
35. 247% of 192
36. 508% of 1073