

Name Key

Hour \_\_\_\_\_

## Percent Short Cuts- No Calculators Allowed.

## Short Cut #1 - Find the rate per hundred.

1. In a recent baseball series - Homer Wrun had 7 hits out of 20 times at bat.  
Grant Schlamme had 9 hits out of 25 times at bat.

Who had the best record?

Grant Schlamme

Complete the two charts:

		Homer				
Hits	7	14	21	28	35	
Times at bat	20	40	60	80	100	

		Grant			
Hits	9	18	27	36	
Times at bat	25	50	75	100	

2. Lefty Fielder had 8 hits in 40 times at bat. What percent of the time did Lefty get a hit? 20%

Hits	8	4	2	10	20
Times at bat	40	20	10	50	100

3. Create charts for the following to determine the percent of hits.

a. 8 hits in 20 times at bat = 40 %

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

b. 4 hits in 16 times at bat = 25 %

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

c. 2 hits in 5 times at bat = 40 %

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

d. 6 hits in 30 times at bat = 20 %

$$\frac{6}{30} = \frac{1}{5} = \frac{x}{100}$$

e. 24 hits in 80 times at bat = 30 %

$$\frac{24}{80} = \frac{3}{10} = \frac{x}{100}$$

f. 60 hits in 150 times at bat = 40 %

$$\frac{60}{150} = \frac{6}{15} = \frac{2}{5} = \frac{x}{100}$$

## Short Cut #2 - The One-Percent and Ten-Percent Method

Think  $1\% = \frac{1}{100}$   
 so divide by 100,  
 or move decimal  
 point 2  
 places to  
 the left

1. Find one percent of the following amounts.

1% of 100 = 1      1% of 250 = 2.5      1% of 60 = 0.6

1% of 7.5 = 0.075      1% of 1200 = 12      1% of 3 = 0.03

2. Find ten percent of the following amounts.

10% of 50 = 5      10% of 1500 = 150      10% of 65 = 6.5

10% of 700 = 70      10% of 6 = 0.6      10% of 600 = 60

3. Using the above methods, fill in the following:

If 1% of a number is 4 then, 6% is 24.  
*(Handwritten:  $\times 6$ )*

If 10% of a number is 15 then 30% is 45.  
*(Handwritten:  $\times 3$ )*

If 1% of a number is 25, then 8% is 200.  
*(Handwritten:  $\times 8$ )*

If 10% of a number is 4, then 40% is 16.  
*(Handwritten:  $\times 4$ )*

Think  $10\% = \frac{10}{100}$  OR  $\frac{1}{10}$   
 so divide by 10,  
 or move  
 decimal point  
 1 place to the  
 left

4. Complete the following:

If 50% of a number is 30, then 25% is 15.  
*(Handwritten:  $\div 2$ )*

If 10% of a number is 12, then 5% is 6.  
*(Handwritten:  $\div 2$ )*

5. Work backwards to find the original amount.

2% of it is 6, so 100% is 300.  
*(Handwritten:  $\times 50$ )*

8% of it is 16, so 100% is 200.  
*(Handwritten:  $\times 50$ )*

6% of it is 24, so 100% is 400.  
*(Handwritten:  $\times 50$ )*

7% of it is 35, so 100% is 500.  
*(Handwritten:  $\times 50$ )*

6. Answer the following using the above methods.

a. Mr. Rich earned \$1600 on month. He spent 8% of food. How much did he spend on food?

1% of 1600 is 16 so 8% is \$128  
 $16 \times 8 = 128$

b. A TV is on sale at 12% off. How much will be saved on a \$400 TV?

1% of 400 is 4 so 12% is \$48  
 $4 \times 12 = 48$

**Short Cut #3 - Use estimations!!**

1. How much would you save on a stereo which normally costs \$395.95 if the stereo is on sale for 25% off?

**Round the cost to make the problem easier!!**

Meaning of Percent Method	One-Percent Method	Fraction Method
25% means	1% of \$400 is \$4	25% is $\frac{1}{4}$
\$25 for every \$100 or \$100 for every \$400	25 times \$4 = \$100	$\frac{1}{4}$ of \$400 is \$100

2. Give the approximate discount on each item.

Item	Cost	% of Discount	Rounded Cost	Approximate Discount
Radio	\$ 89.98	10%	\$90	\$9
Calculator	\$ 79.00	15%	\$80	\$12
Watch	\$ 99.00	12%	\$100	\$12
T.V.	\$399.90	20%	\$400	\$80
Bicycle	\$249.98	5%	\$250	\$12.50
Ring	\$ 39.95	30%	\$40	\$12

*10% → 9*  
*10% + 5% → \$8 + \$4*  
*10% + 1% + 1% → 10 + 1 + 1*  
*10% + 10% → 40 + 40*  
*10% = 25 so 5% = 12.50*  
*10% + 10% + 10% → 4 + 4 + 4*

**Short Cut #4- Think first!! Is your answer logical?**

In each case below, decide which answer is the most reasonable and then provide one or two sentences to explain your choice.

1. Sammy had 17 out of 21 correct. About what percent is this?

- a. 50%    
  b. 80%    
  c. 40%    
  d. 96%

*More than half!*

*It's closer to 17/20 which is 85%*

2. Jodi made 8 baskets out of 17 tries. About what percent is this?

- a. 55%    
  b. 8%    
  c. 17%    
  d. 45%

*close to half!*