


# PERCENTS ON TAKS

NAME and CLASS PD \_\_\_\_\_

<p>1. Last basketball season Ricky made 58% of the free throws he attempted. In the first game this season, Ricky went to the free-throw line 10 times. About how many free throws did Ricky make if his success rate from last season continued?</p> <p><b>F</b> 58 <b>G</b> 10 <b>H</b> 6 <b>J</b> 4</p>	<p><u>Rule out answers with logic:</u> If he only has 10 times to make free throws, can he make 58 free throws? _____ If he only makes 58%, can he make all 10 of them? _____</p> <p>Circle the "of" in the problem. Of what? _____ How many were there? _____ Change the percent to a decimal _____ and fill in the spaces in our formula. Put an x in the space for our unknown variable.</p> <p><b>Now use the formula:</b> # = % of # _____ = _____ × _____</p>
<p>2. A couple bought a house and calculated that they would pay 30% of their combined monthly income of \$5,569.75 toward the monthly mortgage payment on the house. Approximately how much will the couple pay for their monthly mortgage payment?</p> <p><b>A</b> \$186 <b>B</b> \$1,671 <b>C</b> \$3,899 <b>D</b> \$18,566</p>	<p><u>Rule out answers with logic:</u> Will they just be paying \$186 each month? _____ Since their combined income is less than 6k, will they be paying \$18,566? _____</p> <p><b>Now use the formula</b> _____ = _____ × _____</p> <p>Circle the "of". Of what? _____ Fill it in the formula. Change the percent to decimal _____ %- = _____. Use an x for our variable and solve.</p>
<p>3. Mr. Salinas, a real estate agent, received a 5% commission on the selling price of a house. If his commission was \$6,975, what was the selling price of the house?</p> <p><b>F</b> \$7,342 <b>G</b> \$34,875 <b>H</b> \$139,500 <b>J</b> \$662,625</p>	<p><u>Rule out answers with logic; use the formula:</u> _____ = _____ × _____</p> <p>The agent gets 5% of what? _____ Do we know the selling price? This is our variable x.</p>

<p>4. A recycling center pays \$0.35 per pound of glass that it receives. If students at Falcon High School want to raise \$500 in a glass-recycling project, what is a reasonable number of pounds of glass they must collect?</p> <p>A 750 lb B 175 lb C 500 lb D 1500 lb</p>	<p>So where is the percent? Remember 35 cents is 35% of a dollar. Fill in the formula.</p> $\frac{\text{\#}}{\text{\#}} = \frac{\%}{100} \times \text{\#}$ <p>There is no "of", but words like per and each are the same as "of". So, .35 of _____</p> <p>We don't know the pounds of glass so this is our variable x. Fill in the 500 and solve.</p>
<p>5. Rhonda estimated it would take 12 hours to complete her research project. If this represents only 80% of the number of hours it actually took her to complete the project, how many hours did Rhonda spend on the project?</p> <p>A 9.6 h B 15 h C 3 h D 960 h</p>	<p>"of" what _____</p>  <p>If your answer is 9.6, you stepped into a trap!! Show your work below.</p>
<p>6. Harris has \$20.92 to spend on video-game rentals at a local video store. The store charges \$3.95 per video-game rental plus an 8.125% tax. What is the maximum number of video games that Harris can rent?</p> <p>A 5 B 4 C 6 D 3</p>	<p>Formula:</p> $\text{\#} = \frac{\text{\$}}{\text{\$/rental}} \times \text{\%}$ <p>This will give us the tax. Now find the cost of the video and tax: 3.95 + _____ = _____</p> <p>Each video with tax is approximately \$_____</p> <p>How many can he buy? _____</p> <p>Can you round up in a situation like this? _____</p>
<p>7. Vicki works as a salesclerk in a clothing store. She earns \$10 per hour plus a commission of 6% of her total sales. Which equation represents <math>e</math>, her total earnings when she works <math>h</math> hours and sells a total of <math>d</math> dollars in merchandise?</p> <p>A <math>e = 10h + 0.06d</math> B <math>e = 10h + 0.6d</math> C <math>e = 6h + 10d</math> D <math>e = 0.06h + 10d</math></p>	<p>The key on this problem is to be able to correctly change the percentage. Sorry, but if you cannot change a percent into a decimal correctly, you will never get percent problems correct.</p> <p>What is 6% in decimal form? _____</p>

**SOMETIMES IT TAKES MORE THAN ONE STEP TO SOLVE THESE PROBLEMS**

8.

Of the 32 students in Mrs. Zane's class, 25% have brown hair. Of the remaining students, 12.5% have red hair. How many students in Mrs. Zane's class have red hair?

- A 3
- B 4
- C 21
- D Not here

1. How many have brown hair? \_\_\_\_\_

Formula:

\_\_\_\_\_ = \_\_\_\_\_ × \_\_\_\_\_

2. Subtract the brown heads from the total. How many are left?

\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

3. Of the leftovers, 12.5% have red hair.

Formula:

\_\_\_\_\_ = \_\_\_\_\_ × \_\_\_\_\_

Answer? \_\_\_\_\_

9.

Bruce went to a barbershop for a haircut. The price for a haircut at this barbershop is \$15, tax included. If Bruce tipped the barber 15% of the cost of the haircut and the tax, how much change in dollars and cents should he have received if he paid with a \$20 bill?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

Record your answer and fill in the bubbles. Be sure to use the correct place value.

				.			
0	0	0	0		0	0	0
1	1	1	1		1	1	1
2	2	2	2		2	2	2
3	3	3	3		3	3	3
4	4	4	4		4	4	4
5	5	5	5		5	5	5
6	6	6	6		6	6	6
7	7	7	7		7	7	7
8	8	8	8		8	8	8
9	9	9	9		9	9	9

What are we looking for? The tip or the change? \_\_\_\_\_

1. How much is the tip? \_\_\_\_\_

Formula:

\_\_\_\_\_ = \_\_\_\_\_ × \_\_\_\_\_

2. How much was the haircut plus the tip? \_\_\_\_\_

3. If he paid with a \$20, how much was left?

10.

The table shows the results of a survey given to 450 graduating seniors about their educational plans after high school.

### Educational Plans

Institution	Percent
University	44
Community college	26
Technical school	15
Undecided	15

Based on these data, which of the following statements is true?

- A Only 15 students have no future educational plans.
- B More students plan to attend a community college or technical school than plan to attend a university.
- C Fewer than half of the students plan to attend a university.
- D Fewer than one-fourth of the students plan to attend a community college.

11.

Narong's family bought 3 shirts, 2 pairs of jeans, and 2 pairs of shoes. Each shirt cost \$18, and each pair of shoes cost \$35. The jeans were marked down from their original price of \$40. What other information, if any, is needed to find the total cost of the 7 items before tax?

- A The percent markdown for the shirts
- B The original price of the jeans
- C The percent markdown for the jeans
- D No additional information is needed.

12.

The price for this year's season tickets to a city hockey team's games was reduced by 15% from last year's ticket price,  $x$ . As a result, there was a 22% increase in the number of season-tickets sold this year. If a total of 4000 season tickets were sold last year and each season ticket is equally priced, which expression could be used to determine the total sales from this year's season tickets?

- A  $4000(1 + 0.22)(1 + 0.15)x$
- B  $4000(1 + 0.22)(1 - 0.15)x$
- C  $4000(1 - 0.22)(1 - 0.15)x$
- D  $4000(1 - 0.22)(1 + 0.15)x$

This year's tickets were \_\_\_\_\_ by 15%. Does this mean to add, subtract, multiply, or divide? \_\_\_\_\_

Change the percentage to a decimal. \_\_\_\_\_

This eliminates 2 answers \_\_\_\_\_ & \_\_\_\_\_

"Increase" Does this mean to add, subtract, multiply, or divide? \_\_\_\_\_

What percent was increased? \_\_\_\_\_ in decimal form \_\_\_\_\_ So this eliminates answers \_\_\_\_\_ & \_\_\_\_\_

So, what is left? \_\_\_\_\_

## Using the Store program:

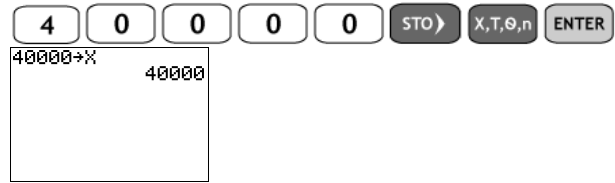
13.

Mrs. Franklin received a 7% raise at her job. If she was earning  $x$  dollars per year before, how much is she earning now?

- F**  $x + 7$
- G**  $x + 0.07$
- H**  $x + 0.7x$
- J**  $x + 0.07x$

Determine which answer is correct. Now, when the problems are more complicated or if you get confused here is a way to calculate which answer is most reasonable.

- Change the 7% to a decimal and cross out the 2 wrong answers.
- Look at the remaining 2 answers. Pick out an amount the Mrs. F earns. Let's say \$40,000
- Type in the calculator 40000. Press store: STO X



4. Now type in  $x + .07$  enter

5. Now type in  $x + .07$  enter

Which answer makes sense? \_\_\_\_\_

If we were to have done this for F.  $x + 7$  enter

That is a \_\_\_\_\_ dollar raise.

For  $x + .7x$  enter, we get a really crazy number.

14.

Ronald wants to buy a shirt that is on sale for 15% off the regular price. The regular price of the shirt is  $p$  dollars. Which expression represents the sale price of the shirt?

- F**  $p - 0.15p$
- G**  $p + 0.15p$
- H**  $p - 15p$
- J**  $0.15p$

First, change 15% to a decimal and cross out the stupid answers.

You have three left. Pick an amount that the shirt might cost...how about \$40

Type in 40 Press Store and "p" using the alpha keys.

Now, type in  $p - .15p$  enter \_\_\_\_\_

Is that reasonable? \_\_\_\_\_

Now type in  $p + .15p$  enter \_\_\_\_\_

Is that reasonable? \_\_\_\_\_

Now type in  $.15p$  enter \_\_\_\_\_

Is that reasonable? \_\_\_\_\_

Which answer makes sense????? \_\_\_\_\_

.15p is the amount needed to be taken off the original price!