

Concept: Percent of a Number

Name: _____

Warm-Up:

Percent (%) means **per** _____ or **out of** _____.

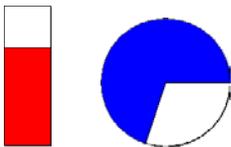
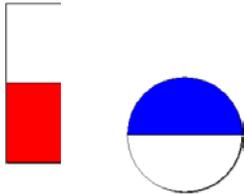
Circle 100% of the following:

100% of the balls. 	100 % of the teddy bears 
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Parts of both the rectangle and circle are shaded to show a percentage of the whole shape.

The whole shape would be _____ parts.

Given the part that is shaded calculate the percent shaded.

(a)  <p>Part shaded is 70.</p> <p>70 is _____ % of _____</p>	(b)  <p>Part shaded is 33.</p> <p>33 is _____ % of _____</p>
(c)  <p>Part shaded is 10.</p> <p>10 is _____ % of _____</p>	(d)  <p>Part shaded is 50.</p> <p>50 is _____ % of _____</p>

Calculate

(a) $\frac{1}{2} \times 8 =$

(b) $\frac{1}{5} \times 20 =$

(c) $\frac{2}{10} \times 70 =$

(d) $\frac{4}{9} \times 81 =$

Change the percent to a decimal

(a) 50 % =

(b) 25 % =

(c) 33 % =

(d) 100 % =

COMPUTER COMPONENT

Instructions: In  follow the **Content Menu** path:

Percent > Percent of a Number



Work through all Sub Lessons of the following Lessons **in order**:

- *In This Topic*
- *The Concept*
- *Examples*
- *The Bouncing Ball*
- *Successive Percentage Changes*
- *Grades...*



As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

NOTES:

Reminder: The “**of**” in 10% **of** 100 means _____.

To find the percent of a number:

Change the _____ to a _____ or _____
 then _____ by the number.

OFF COMPUTER EXERCISES

1. 30 students in a literature project in school were assigned four types of books to read. The circle graph shows the percentage of students who regularly read each type.



A. How many students read the following?

(a) Adventure

(b) Biography

(c) Mystery

(d) Science Fiction

B. How many more students read adventure books than biography books?

C. Name two types of books that were read by 50% of the students.

D. Suppose 25 % of the students who read adventure books read the same book. How many students read the same book?

2. Without calculating 125% of 15:

(a) Do you expect a result more or less than 15? Explain.

(b) Is the result as much as 30? Why or why not?

(c) Is the result about 20?" Why or why not?

Now calculate 125% of 15

3. Jasmine placed 30% of her weekly allowance in her savings account. Jasmine's allowance is \$12 each week.

(a) How much money does she place in her bank account each week?

(b) How much money does she place in her bank account each year?

(c) Does Jasmine leave herself enough spending money each week? Explain your answer.

4. Find the percent of each number using a decimal. Then write each letter above the correct answer in the puzzle to complete the sentence.

(a) 15% of 150 = E	(b) 33% of 300 = A
(c) 70% of 165 = B	(d) 120% of 625 = G
(e) 30% of 140 = A	(f) 98% of 150 = R

(g) 17% of 50 = E	(h) 2% of 240 = V
(i) 40% of 150 = V	(j) 87% of 100 = A
(k) 0.6% of 360 = O	(l) 7% of 150 = E

Eighty percent of all people consider themselves to be

$\frac{\quad}{87}$ $\frac{\quad}{147}$ $\frac{\quad}{2.16}$ $\frac{\quad}{60}$ $\frac{\quad}{10.5}$ $\frac{\quad}{99}$ $\frac{\quad}{4.8}$ $\frac{\quad}{8.5}$ $\frac{\quad}{115.5}$ $\frac{\quad}{42}$ $\frac{\quad}{78}$ $\frac{\quad}{22.5}$

5. Of all the students who begin a post secondary education, 42% of those do not complete their education. If 60 people begin college in a given year, what is your **estimate** of how many would not complete their education?

a. Explain how you determined your estimate.

b. Calculate the actual number of students that are not expected to complete their education. Why do you think this happens?

6. A ball is dropped from a height of 6m and rises to 82% of its original height with each bounce. After two bounces, what is the maximum height that the ball can be?
7. Sophie has \$550 in her savings account. She withdraws 25% of her money and then spends 18% of the withdrawn money on new clothes. How much money does she have left
- a. in her bank account?
- b. of the withdrawn money?

8. The final Math mark for this year is calculated as follows

$$\text{Final Grade} = 65\% \text{ of the term grade} + 35\% \text{ of the exam grade}$$

Fill in the chart below.

	My Current term Grade Is....	Possible Exam Grade ...	My Final Grade Will Be
(a)	86%	0%	
(b)	86%	80%	
(c)	86%	92%	
(d)	50%	75%	
(e)	64%	42%	
(f)	64%	80%	

Which one of the possible situations in the previous chart is least likely to happen? Why?
