7.3 Percents *and* Decimals

Students will be able to use decimals to solve percent problems.

Percents and Decimals

To write a <u>**decimal**</u> as a <u>**percent**</u>, move the decimal point two places to the right and write a percent sign.

$100(0.05)$ 1.78

To write a <u>**percent**</u> as a <u>**decimal**</u>, move the decimal point two places to the left and remove the percent sign.

$\dfrac{12\%}{100} = .12$ .007   0.07%

Writing Decimals as Percents

0.62	0.055
*1.34	*0.725
100%	0.52

Writing Percents as Decimals

25% .25	93%
0.05% .0005	0.3%
330% 3.3	125%

Writing Fractions as Percents

You can write a fraction as a percent by first writing the fraction as a decimal.

$\dfrac{2}{3}$ .6666
~ 66.7%
= 66⅔%

$\dfrac{5}{4}$ 1.25
125%

$\dfrac{6}{12}$

$\dfrac{1}{8}$ .125 12.5%

Fractions, Decimals, Percents

$\dfrac{1}{2}$ .5 50%

75% $\dfrac{75}{100}$ $\dfrac{3}{4}$ .75

0.20 20% $\dfrac{20}{100} = \dfrac{1}{5}$

Fractions, Decimals, Percents

Fraction	Decimal	Percent
1/4	.25	25%
$\frac{3}{100}$	0.03	3%
$\frac{12}{100} = \frac{3}{25}$	1.12	112%

Finding a Percent of a Number

What is 22% of 300?

$.22 \cdot 300 =$ 66

Find 3.8% of 85. 3.23

$\frac{380}{100} = \frac{x}{85}$ $.038 \cdot 85$

125% of 64

$1.25 \cdot 64 = 80$

The African pygmy hippo is the smallest species of hippopotamus. Suppose a common adult hippo weighs 5,600 pounds, and an adult pygmy hippo's weight is 10.5% of the common adult hippo's weight. How much does the adult pygmy hippo weigh?
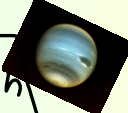
$\frac{5600}{10.5}$ 533.3

$.105 \cdot 5600 = 588$

Of a radio station's 40 most popular songs for a week, 5/8 were sung by women. What percent of the songs were sung by women?

$\frac{x}{40} = \frac{62.5}{100}$

$.625 \cdot 40 = 25$ songs

62.5%

The winds on Neptune are the strongest on any planet in our solar system and can reach a speed of about 1500 miles per hour. The winds of a tornado near Bridge Creek, Oklahoma, in 1999 were about 21.2% as fast as the winds on Neptune. What was the wind speed in the tornado?

$.212 \cdot 1500 = 318$ mph

or

$\frac{x}{1500} = \frac{21.2}{100}$

Homework

Pg. 358-360

#3-12, 14, 22, 26, 30, 34, 40, 42, 46, 50, 58, 60