Are there any Homework Questions you would like to see on the board?

p. 446 # 1 – 7

(Also worksheets on Website)

Today's Learning Goal(s):

By the end of the class, I will be able to:

a) Convert a percent to a decimal.
b) Calculate the percent of a number.
c) Evaluate exponential functions for a given value for x.
d) Convert units of time from weeks to years, months to years, and days to years.

MCF 3MI   8.0 Getting Started – *Unit 8*

Date: __May 27/19__

Ex. 1: Convert each percent to a decimal.

a) 29%   b) 107%   c) 0.4%   d) 45%   e) 59%   f) 7.5%   g) 100%   h) 3.65%

$= 0.29$ $= 1.07$ $= 0.004$ $= 0.45$ $= 0.59$ $= 0.075$ $= 1$ $= 0.0365$

Ex. 2: Determine each amount.

a) 5% of 80   b) 3.8% of 240   c) 75% of 68   d) 7.25% of 2000

$= 0.05 \times 80$ $= 0.038 \times 240$ $= 0.75 \times 68$ $= 0.0725 \times 2000$

$= 4$ $= 9.12$ $= 51$ $= 145$

Calculating a Restaurant Tip *Note: 15 % is usually considered the MINIMUM tip percentage.*
          (in your head)

e) 15% of 40   f) 15% of 64   g) 15% of 85   h) 15% of 66

$= (10\% + 5\%)$ of $\$40$

64	64
0.10	0.05
6.4	3.2

$= 4 + 2$

$= 6$ $= 9.6$

10% → 8.50
5% → 4.25
_____
12.75

10% → 6.6
5% → 3.3
_____
$9.90

Ex. 3: Express each of the following as a fraction of a year.

a) 2 weeks   b) 4 months   c) 140 days

$= \dfrac{2 \text{ weeks}}{52 \text{ weeks/year}}$

$= \dfrac{1}{26}$ year

$= \dfrac{4}{12}$ year

$= \dfrac{1}{3}$

$\dfrac{140}{365}$

$= \dfrac{28}{73}$

Ex. 4: Evaluate the following exponential functions. Remember BEDMAS!

a) If $f(x)=4(3)^{2x}$, determine $f(-2)$.

$$f(-2)=4(3)^{2(-2)}$$
$$=4(3)^{-4}$$
$$=4\left(\frac{1}{3}\right)^4$$
$$=4\left(\frac{1}{3^4}\right)$$
$$=4\left(\frac{1}{81}\right)$$
$$=\frac{4}{81}$$

b) If $f(x)=3(4)^{2x}$, determine $f(3)$ and $f(-3)$.

$$f(3)=3(4)^{2(3)}$$
$$=3(4)^6$$
$$=3(4096)$$
$$=12288$$

$$f(-3)=3(4)^{2(-3)}$$
$$=3(4)^{-6}$$
$$=3\left(\frac{1}{4^6}\right)$$
$$=\frac{3}{4096}$$

c) If $f(x)=5(2)^{3x}$, determine $f(-2)$ and $f(2)$.

$$f(-2)=5(2)^{3(-2)}$$
$$=5(2)^{-6}$$
$$=5\left(\frac{1}{2^6}\right)$$
$$=5\left(\frac{1}{64}\right)$$
$$=\frac{5}{64}$$

$$f(2)=5(2)^{3(2)}$$
$$=5(2)^6$$
$$=5(64)$$
$$=320$$

d) If $f(x)=20000(1.02)^x$, determine $f(10)$ and $f(20)$.

$$f(10)=20000(1.02)^{10}$$
$$\doteq 24379.888$$
$$\doteq 24379.89$$

$$f(20)=20000(1.02)^{20}$$
$$\doteq 29718.947$$
$$\doteq 29718.95$$

Homework: p. 452 # 5 – 10, 13

Revisit Today's Learning Goals

Today's Homework:

Study for the Unit 7 Summative!!   (on Wed.)

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