

Mr. Northcutt's Math Classes Class Presentation

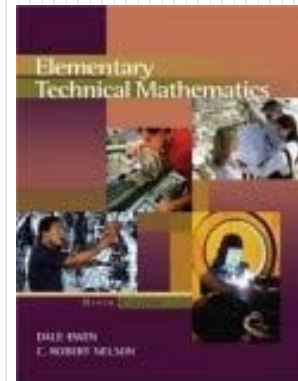
November 11, 2008 (48)



Math 1



Math 2



Applied Math



Math 1 – Daily Summary

- **Announcements**
 - Quiz covering Sections 4-1 thru 4-3 on Thursday.
- **Class Objectives**
 - Ratio & Proportion: Percentages
- **Assignment**
 - Lesson 4-3: 2-38 EVEN



HW Solutions: 4-2

2: See Whiteboard

4: $13 \frac{1}{3}$ cm

6: 40 m

8: 7.2 ft

10: 12 in

12: 145.25 mi

14: 350 mi

16: 1cm:8 km

18: $2 \frac{2}{3}$ in by 4 in

20: 3.2 in by 4.8 in

22: 22.5 ft by 27 ft

24: 1 in : 12 ft

26: 3 ft

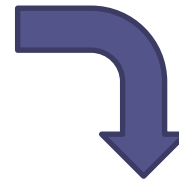
28: Yes, because it is 6 ft wide and 9 ft long



Percentage

- A Ratio that compares a number to 100 – or a part to a whole.

$$\% = \frac{n}{100} = \frac{\textit{part}}{\textit{whole}}$$



- **Example:**

- What percent of 80 is 18?
 ↑ ↑
 whole part

➤ 18 is **22.5%** of 80

$$\begin{aligned}\% &= \frac{n}{100} = \frac{18}{80} \\ 80n &= 18(100) \\ n &= \frac{1800}{80} = 22.5\end{aligned}$$



Percentage – Finding Part/Whole

n **whole**

- Find 75% of 320.

$$\% = \frac{75}{100} = \frac{p}{320}$$

$$100p = 75(320)$$

$$p = \frac{24000}{100} = 240$$

part **n**

- 20 is 40% of what number?

$$\% = \frac{40}{100} = \frac{20}{w}$$

$$40w = 20(100)$$

$$p = \frac{2000}{40} = 50$$

$$\% = \frac{n}{100} = \frac{\text{part}}{\text{whole}}$$



Another Example

- **What percent of 170 is 68?**

$$\% = \frac{n}{100} = \frac{68}{170}$$

$$170n = 100(68)$$

$$p = \frac{6800}{170} = 40$$

40%



More About Percentages

- **Percentages Written in Decimal/Fractional Form**

$$45\% = \frac{45}{100} = 0.45 = \frac{9}{20}$$



- **Percentages Greater than 100% (or less than 1%)**

- What percentage of 90 is 135?

$$\% = \frac{n}{100} = \frac{135}{90}$$

$$90n = 100(135)$$

$$n = \frac{13500}{90} = 150$$



Estimating Percentages

- **Estimate: 49% of 280 is what number?**
 - 49% is close to 50% = $\frac{1}{2}$...so a good estimate is **140**
- **In 1997, the total production of milk in the US was 156 billion pounds. The Midwestern states of MI, MN, IA, WI & IL produced 25.98% of this total. Estimate the amount of milk produced in these states.**



Math 2 – Daily Summary

- **Announcements**

- Last Day for 1st Quarter Assignments/Tests!
- Chapter 5 Test, Thursday, November 20th

- **Class Objectives**

- Quiz on Sections 5.1 thru 5.3 + Algebra Review
- HW Check after Quiz
 - Lessons 5.3 & 5.4

- **Assignment**

- No Assignment



HW Solutions – 5.4

1: SAS

2: SSS

3: SAS

4: FLE

5: AIN

6: *CBD* (Cannot Be Det.)

7: ETU

8: EIT

9: *CBD*

10: ARC using SSS

11: *CBD*

12: SAO using SAS

20: (12,7)

21: See Whiteboard



Applied Math – Daily Summary

- **Announcements**
 - Quiz on Sections 6.1 thru 6.6 (Equations) on Thursday
- **Class Objectives**
 - Applications of Equations (Part 1)
- **Assignment**
 - Lesson 6.6: 2-12 EVEN



Applications of Equations

- Separate an order of 256 light fixtures so that the number of fluorescent light fixtures will be 20 fewer than twice the number of incandescent light fixtures.
 - Let f = # of fluorescent light fixtures
 - Let n = # of incandescent light fixtures

$$f + n = 256 \quad (\text{total number of bulbs})$$

$$f = 2n - 20 \quad (\text{relationship between } f \text{ and } n)$$

- What can we do when we have two variables?



Steps for Problem Solving

- **You might find the following process useful:**
 1. Read the problem carefully (at least twice)
 2. Draw a diagram to help visualize the problem.
 3. Define a Variable(s) for the unknown quantity(s).
 4. Write an Equation(s) to express relationships in the problem using the variable(s).
 5. Solve the equation for the variable(s).
 6. Check your answer – in the equation and using common sense.



Another Example

- Distribute \$4950 among Cecilly, Mitchell and Kyle so that Cecilly receives twice as much as Mitchell and Kyle receives three times as much as Mitchell.

- Let c = amount Cecilly receives
- Let m = amount Mitchell receives
- Let k = amount Kyle receives

NOTE: You are actually solving a System of Equations by Substitution.

$$\begin{array}{l} c = 2m \\ k = 3m \\ c + m + k = 4950 \end{array} \quad \begin{array}{l} 2m + m + 3m = 4950 \\ 6m = 4950 \end{array}$$

$$\begin{array}{l} m = \$825 \\ c = \$1650 \\ k = \$2475 \end{array}$$