

# Monday, August 27, 2012

## TISK Problems

1. Sketch a scatter plot with a weak negative correlation. Write a sentence describing the correlation and label your axes appropriately.
2. If  $a = 3$  and  $b = -4$ , evaluate  $ab - b$ .
3. Sketch the equation  $y = 3x + 1$  for  $x = -2, -1, 0, 1$  and  $2$ .

No Mental Math today.

Homework: p. 86 #12-17 & 22-25

# Homework Check

30)  $-5.35$

32)  $9$

34)  $-1288$

36)  $6.35$

38)  $-24.27$

40)  $-\frac{1}{12}$

41)  $\frac{1}{17}$

42)  $\frac{25}{6}$

43)  $-\frac{9}{4}$

57)  $1$

58)  $24$

59)  $-144$

60) False

61) False

62) True

63) True

65) a. Juan deposited \$100.  
b. Juan withdrew \$50.  
c. Juan must make 8 \$25 deposits to save \$200.

# Quiz Time

- ▶ When finished with your quiz...
  - Organize your 4 homework assignments and quiz on your desk in the following order:
    - Quiz on top
    - 2.4 Homework
    - 2.3 Homework
    - 2.2 Homework
    - 2.1 Homework
  - Wait quietly until time is up.
  - Have your notes out and ready for the lesson when time is up.

# §2.5 Properties of Algebra

- ▶ Commutative Property of ...
  - ... Addition
    - For all real numbers  $a$  and  $b$ :  $a + b = b + a$
    - So what does that mean?
  - ... Multiplication
    - For all real numbers  $a$  and  $b$ :  $ab = ba$
    - So what does that mean?

# §2.5 Properties of Algebra

- ▶ Associative Property of ...
  - Addition
    - For all real numbers  $a$ ,  $b$ , and  $c$ .  
 $(a + b) + c = a + (b + c)$
    - Why is this helpful?
  - Multiplication
    - For all real numbers  $a$ ,  $b$ , and  $c$ .  
 $(ab)c = a(bc)$
    - How can this help us?

# Example Problems

- ▶ Complete each step and name the property used.
  - $(36 + 15) + 64$
  - $= (15 + 36) + 64$       Commutative Property
  - $= 15 + (36 + 64)$       Associative Property
  - $= 15 + 100$
  - $= 115$

# Example Problems

- ▶ Use the Associative and Commutative Properties to find each sum or product. Show your work and name the properties used.
  - $(52 \cdot 25) \cdot 4$ 
    - $= 52 \cdot (25 \cdot 4)$       Associative Property
    - $= 52 \cdot 100$
    - $= 5,200$
  - $64 + (37 + 16) + 13$ 
    - $= 64 + (16 + 37) + 13$       Commutative Property
    - $= (64 + 16) + (37 + 13)$       Associative Property
    - $= 80 + 50$
    - $= 130$

# Distributive Property

- ▶ For all real numbers  $a$ ,  $b$ , and  $c$ :

$$a(b + c) = ab + ac$$

- ▶ How will this help us speed up mental math?

- ▶ Multiply  $8(21)$ :

- $= 8(20 + 1)$
- $= 8(20) + 8(1)$
- $= 160 + 8$
- $= 168$

- ▶ Multiply  $11(35)$ :

- $= (10 + 1)(35)$
- $= 10(35) + 1(35)$
- $= 350 + 35$
- $= 385$



# Example Problems

- ▶ Use the Distributive Property and mental computation to calculate each product.

- ▶  $14(22)$

- ▶  $= 14(20 + 2)$

- ▶  $= 14(20) + 14(2)$

- ▶  $= 14(2 \cdot 10) + 14(2)$

- ▶  $= 28(10) + 28$

- ▶  $= 280 + 28$

- ▶  $= 308$

# Homework

- ▶ p. 86 #12–17 & 22–25