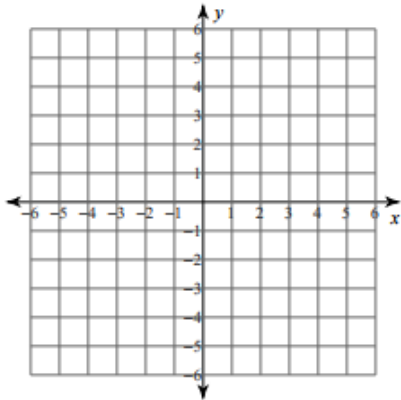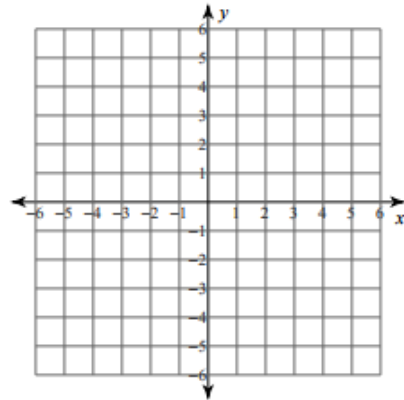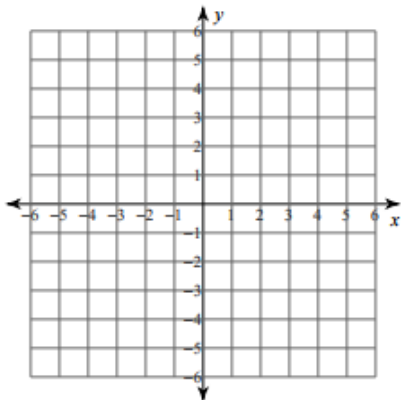## Homework Day 1

1. Graph each line.

a) $y = \frac{4}{3}x - 4$
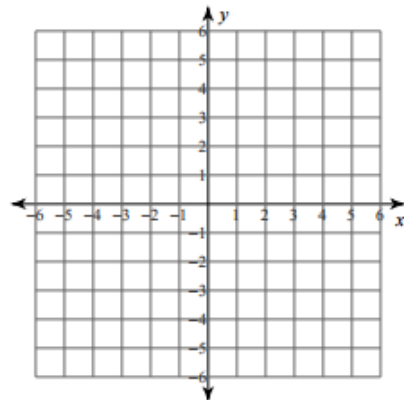
b) $y = -3x - 3$
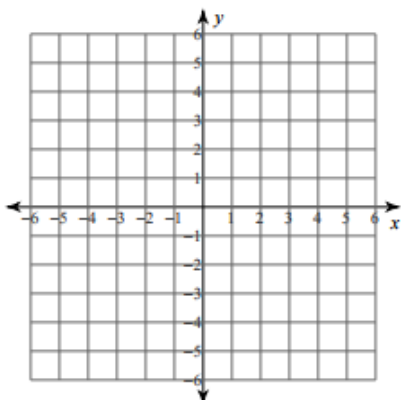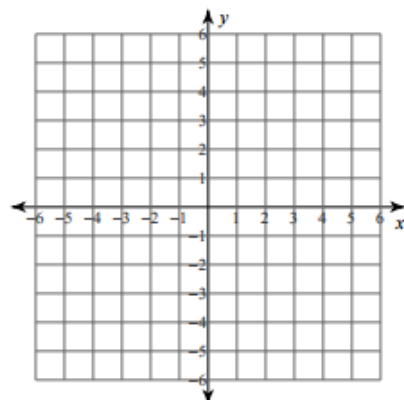
c) $y = 4$

d) $x = 5$

e) $y = 3x - 2$

f) $y = \frac{6}{5}x + 5$

2. Pet owners may have to take out a loan when their animals has a major operation. Buddy needs to have surgery on his leg. The cost of the surgery $2500. His owner will get a loan for this amount over 2 years at a rate of 7.5%.

    a) How much will the interest be on this loan?

    b) What is the total cost of the surgery including the loan and the interest?

3. You walk into a store and pick out a matching hat and shirt. The hat costs $25 while the shirt cost $27. If the sales tax is 5%, what is the cost of both items together?

4. You only have $6 in your hands. You want to buy a combo meal that is $5.55. The sales tax is 8%. Do you have enough money to buy the combo meal?

5. The sporting goods store is having a blowout sale. The store is selling everything with a 40% discount. You want to buy a mountain bicycle that originally sold for a regular price of $300. If the sales tax is 7.5%, how much do you need to pay?

Homework Day 2

1. Solve.

    a) 15.8 is what percent of 200? b) What is 0.8% of 59?

2. Two businesswomen are having lunch at a restaurant. Their bill came to $47.85, and they want to leave an 18% tip. What is the amount of the tip.

3. The price of a set of feeding bowls for dogs had been $9.25, but was increased to $11.10. What was the percent increase?

4. Dr. Star Blanket gives a 20% discount if his customers pay cash for their office visits. Determine the cost of a $65 office visit if the customer pays cash.

5. Write each equation in slope-intercept form.

    a) $x - 4y + 1 = 0$ b) $6x - 3y - 2 = 0$

6. Last year the value of John's car was $15,700. This year the value is $13,345. What is the percent change in the car's value?

7. The regular price of a laptop computer is $1,000. As part of a promotion a 30% discount is available. The sales tax is 6%. How much do you save after the discount and tax? (Do not forget the 6% sales tax on the regular price.)

8. Alex has $1,000 worth of stocks. The value of his stocks increased by 20% and then decreased by 20%. Is the value of Alex's stocks back at $1,000? Show your answer.

9. Find the slope, the y-intercept, and the x-intercept of the graph of each equation using slope-intercept form.

    a) $y - 4x = 9$ b. $2x + 3y - 4 = 0$

10. *Multiple choice*: Which of the following equations has a slope of -2 and a y-intercept of 4?

    A. $y - 2x = 4$
    B. $y + 2x = -4$
    C. $2y + 4x = 4$
    D. $2y + 4x = 8$
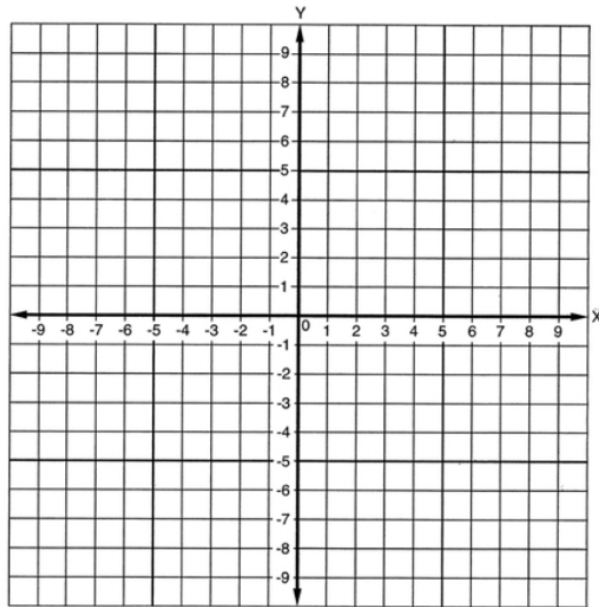
Homework Day 3

1. Write the equation in slope-intercept form. Then graph the equation on same graph below.

   a) $2x - y = 3$

   b) $2x - 3y - 6 = 0$

   c) $0.2y = x + 1$

   d) $4x + 5y = 15$

2. Solve.

   a) What is 0.02% of 1,000?

   b) 2.4% of what number is 0.08?

   c) 33.75 is what percent of 75?

   d) $67,200 is 112% of how much?

3. An online bookstore sells books 20% cheaper than a local walk-in bookstore. If a book is $10 online, how much is the book in the local store?

4. You deposit $50 in a savings account that earns 8% annual interest. How much would be in the account after 18 months assuming that no deposits and withdrawals are made?

5. If you bought goods or services for $200.00 in the year 2000, the same goods or services would cost $226.83. What is the percent change in the amount of dollars you have to pay?
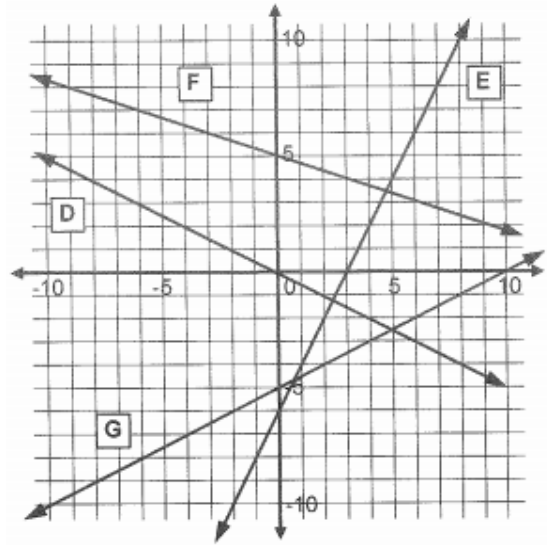
6. When merchandise is returned, a store charges a 15% restocking fee. Michael buys a new digital camera for $225. He is not satisfied with the camera and he decides to return it paying the 15% restocking fee. Assuming there is no sales tax, how much money would he get back?

7. Which will result in a higher cost: the price decreases by 10% and then increases by 10% or the price increases by 10% and then decreases by 10%?

Homework Day 4

1. Write the equations of the given graph in slope-intercept form.

   a) Line D

   b) Line E

   c) Line F

   d) Line G

2. The average cost of an education to become a veterinarian is $147,656, which includes veterinary school. To cover these costs, most students take out loans. What would the interest on a loan be if the rate is 3.25% and the term is 15 years?

3. Dr. Jones took out a loan for a van that could be equipped with veterinarian supplies for visits to animal shelters. The van cost $22,500 and the loan was for 4 years. If the interest rate was 4.5%, how much will be paid?

4. Dr. Jones would like a computer system for the office to help with management of the clinic. The cost is $15,000 and the interest rate is 4.6%. The amount of interest to be paid is $3,450. How many months is the loan for?

5. Find the percent of change in the prices below. Round to the nearest whole percent if necessary.

   a) Old: $17.50   New: $14.00

   b) Old: $213.80   New: $203.11

6. Find the percent discount.

   a) Regular price: $50
      Sales price: $30

   b) Regular price: $220.50
      Sales price: $185.22

7. Kim purchases pet insurance for her cat. In 2011, she paid $40 per month. She switched to discounted insurance she bought online for $34 dollars a month. What was the percent discount?

8. The grooming department at a local pet store is running a sale of 35% off glooming. If the regular cost is $47.75, what is the sale price?

Homework Day 5

1. Find the regular price.

   a) sale price: $750   discount: 20%

   b) sale price: $1,140   discount: 5%

2. Dr. North Piegan's practice sees 125 cats. In 2010, 24.8% of cats were classified as obese, compared to 21.6 percent in 2011. Find the percent decrease in obese cats in one year.

3. Susie's dog weighed 32 lb in 2020. At the end of 2011, the dog weighed 43.5 lb. What was the percent increase in weight from 2010 to 2011?

4. Solve.

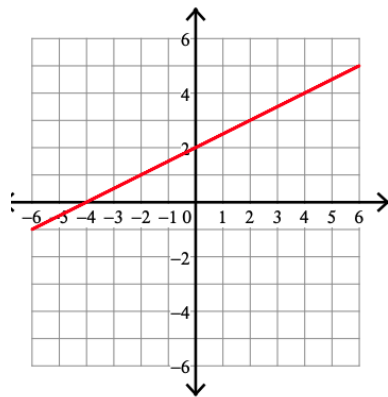   a) 75 is 20% of what number?

   b) 120 is what percent of 90?

   b) 160 is 120% of what number?

   d) What is 200% of 144?

5. Art supplies in Washington, D.C., cost $28. If the sales tax is 6%, what is the total cost of supplies?

6. Joe leaves $3 as a tip for a meal that costs $22. If a good tip is between 15% and 20%, is this a good tip? Explain.

7. Five friends went out to dinner, and the bill came to $85. They wanted to leave a 17% tip. If they split the bill evenly, how much does each person need to pay?

8. Write the equation in slope-intercept form from each graph.

a)

b)