Math 1311

**Homework 6 (Section 3.3 - Section 3.5)**

Record your answers to all the problems in the EMCF titled **“ Homework 6”** .

1. Section 3.3 Exercise 4b
2. Section 3.3 Exercise 4c
3. The slope is 1.6, the amount that the total adjusted gross income per year in trillions increased as reported to the IRS.
4. The slope is 4.2, the amount that the total adjusted gross income per year in trillions increased as reported to the IRS.
5. The slope is 0.5, the amount that the total adjusted gross income per year in trillions increased as reported to the IRS.
6. The slope is 2.6, the amount that the total adjusted gross income per year in trillions increased as reported to the IRS.
7. Section 3.3 Exercise 6a
8. Section 3.3 Exercise 6c
9. $15,582
10. $38,076
11. $29,270
12. $50,885
13. Section 3.3 Exercise 16b

a) -0.03, decrease in the number of students graduating per year since 1985.

b) -0.09, decrease in the number of students graduating per year since 1985.

c) -0.12, decrease in the number of students graduating per year since 1985.

d) -0.25, decrease in the number of students graduating per year since 1985.

Section 3.3 Exercise 16c

a)

b)

c)

d)

1. Section 3.3 Exercise 16d

a)

b)

c)

d)

1. Find a linear model for the following data.



a) 

b) 

c) 

d) 

1. The following table shows the average yearly tuition and required fees, in dollars, charged by a certain private university in the school year beginning in the given year.



What prediction does the formula modeling this data give for average yearly tuition and required fees for the university for the academic year beginning in 

a) 

b) 

c) 

d) 

1. The following table gives the total cost  in dollars, for a widget manufacturer as a function of the number  of widgets produced during a month.



The manufacturer wants to reduce the variable cost so that the total cost at a monthly production level of  will be  What will the new variable cost be?

a) 

b) 

c) 

d) 

1. In general, the highest price  per unit of an item at which a manufacturer can sell  items is not constant but is, rather, a function of  Suppose the manufacturer of widgets has developed the following table showing the highest price  in dollars, of a widget at which  widgets can be sold.



Find a formula for  in terms of  modeling the data in the table.

a) 

b) 

c) 

d) 

12. Section 3.4 Exercise 12b

 a)

 b)

 c)

 d)

13. Section 3.4 Exercise 12c

 a) 1.82 trillion

 b) 1.15 trillion

 c) 1.82 trillion

 d) 1.08 trillion

14. Section 3.4 Exercise 14a

 a)

 b)

 c)

 d)

15. You have  to spend on drinks. Fruit drinks cost and soft drinks cost  You need to buy  times as many soft drinks as fruit drinks. How many soft drinks should you buy?

a) 

b) 

c) 

d) 

16. A company wants to mix peanuts, which contain protein, and cashews, which contain protein, to make a trail mix. If you make a mixture of 10 pounds of peanuts and 60 pounds of cashews, how many pounds of protein are in the mixture?

a) 17.5 pounds

b) 16 pounds

c) 15 pounds

d) 8.5 pounds

17. A bag contains 72 coins, some dimes and some quarters. The total amount of money in the bag is $12.00 Find how many dimes are in the bag.

a) 40

b) 32

c) 8

d) 48

18. Section 3.5 Skill Building Exercise S – 2

 a) The two lines never intersect and there is no solution.

 b) There are infinitely many solutions.

 c) There is only one solution.

 d) No Solution

19. Solve using crossing graphs.

a)

b)

c)

d)

20. Section 3.5 Exercise 16

a) 25 quarters and 5 dimes

b) 15 quarters and 15 dimes

c) 3 quarters and 27 dimes

d) 5 quarters and 25 dimes