Student: yaser almohaws **Submitted:** 12/26/14 1:19am	**Instructor:** fahad aljabr **Course:** MATH-001: Fundamentals of Math 11415 **Book:** Bittinger: Introductory and Intermediate Algebra, 4e	**Assignment:** Graded Homework 10

1. An investment of $83,000 was made by a business club. The investment was split into three parts and lasted for one year. The first part of the investment earned 8% interest, the second 6%, and the third 9%. Total interest from the investments was $6210. The interest from the first investment was 3 times the interest from the second. Find the amounts of the three parts of the investment.

What is the amount of the first part of the investment? $ 54000

What is the amount of the second part of the investment? $ 24000

What is the amount of the third part of the investment? $ 5000

2. In triangle ABC, the measure of angle B is 3° more than three times the measure of angle A. The measure of angle C is 42° more than the measure of angle A. Find the measure of each angle.

What is the measure of angle A? 27 °

What is the measure of angle B? 84 °

What is the measure of angle C? 69 °

3. One canned juice drink is 20% orange juice; another is 5% orange juice. How many liters of each should be mixed together in order to get 15L that is 16% orange juice?

How many liters of the 20% orange juice should be in the mixture? 11 L

How many liters of the 5% orange juice should be in the mixture? 4 L

4. One day a store sold 39 sweatshirts. White ones cost $11.95 and yellow ones cost $13.50. In all, $495.50 worth of sweatshirts were sold. How many of each color were sold?

How many white sweatshirts were sold? 20

How many yellow sweatshirts were sold? 19

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5. Soybean meal is 12% protein; cornmeal is 6% protein. How many pounds of each should be mixed together in order to get 240-lb mixture that is 8% protein?

How many pounds of the cornmeal should be in the mixture?

160 pounds

How many pounds of the soybean meal should be in the mixture?

80 pounds

YOU ANSWERED: 80

160

6. Find the slope and the y-intercept.

$f(x) = -10x - 7$

The slope is -10.

The y-intercept is $(0, -7)$.

7. In the United States, the highest incidence of fraternal twin births occurs among Asian-Americans, then African-Americans, then Caucasians. Of every 13800 births, the total number of fraternal twin births for all three is 662, where there are 165 more for Asian-Americans than African-Americans and 205 more for Asian-Americans than Caucasians. Determine the number for each race.

Out of every 13800 births, there are 344 sets of Asian-American twins, 179 sets of African-American twins, and 139 sets of Caucasian twins.

8. Solve.

$$\begin{aligned} x + y + z &= 85 \quad (1)\\ -2x + 4y &= 64 \quad (2)\\ x - z &= -9 \quad (3) \end{aligned}$$

Thus, the triple $(24, 28, 33)$ is the solution.

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9. Find the slope and the y-intercept.

$3x - 7y = 16$

The slope is $\frac{3}{7}$.

(Type an integer or a fraction.)

The y-intercept is $\left(0, -\frac{16}{7}\right)$.

(Type an integer or a fraction.)

10. Kyle works at a donut factory, where a 10-oz cup of coffee costs 95¢, a 14-oz cup costs \$1.15, and a 20-oz cup costs \$1.50. During one busy period, Kyle served 41 cups of coffee, using 604 ounces of coffee, while collecting a total of \$49.30. How many cups of each size did Kyle fill?

How many 10-oz cups did Kyle fill?

12

How many 14-oz cups did Kyle fill?

16

How many 20-oz cups did Kyle fill?

13

YOU ANSWERED: 12

17

11. Solve.

$$\begin{aligned} x + y + z &= 4 \\ 2x + 5y + 2z &= 2 \\ -x + 8y - 3z &= -22 \end{aligned}$$

Write the solution as an ordered triple.

(6, −2, 0)

12. Solve

$Cx + Gy = J$, for x.

The solution is $x = \frac{J - Gy}{C}$.

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13. Solve.

$$\begin{aligned} 5r - s + t &= 0 \quad (1)\\ 2r + 2s - 3t &= -3 \quad (2)\\ r - 3s + 2t &= -3 \quad (3) \end{aligned}$$

What is the solution? (0 , 3 , 3)

YOU ANSWERED: 0

0

14. Alvin paddled for 5 hours with a 4-km/h current to reach a campsite. The return trip against the same current took 9 hours.

Find the speed of the boat in still water.

What is the speed of the boat in still water?
14 km/h

15. A disc jockey must play 16 commercial spots during 1 hour of a radio show. Each commercial is either 30 seconds or 60 seconds long. If the total commercial time during 1 hour is 13 min, how many 30-second commercials were played that hour? How many 60-second commercials?

How many 30-second commercials were played that hour?
6

How many 60-second commercials were played that hour?
10

16. A basketball team recently scored a total of 98 points on a combination of 2-point field goals, 3-point field goals, and 1-point foul shots. Altogether, the team made 55 baskets and 19 more 2-pointers than foul shots. How many shots of each kind were made?

How many 1-point foul shots did the team make? 16

How many 2-point field goals did the team make? 35

How many 3-point field goals did the team make? 4

17. Solve.

$$\begin{aligned} 4a + 3b + c &= -3 \quad (1)\\ a - 3b + 2c &= -19 \quad (2)\\ 11a - 2b + 3c &= -40 \quad (3) \end{aligned}$$

What is the solution? (−2 , 3 , −4)

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18. Complete the ordered triple.

$$\begin{aligned} 9x - y + z &= 36 \\ 3x + 2y - 3z &= -14 \\ x - 3y + 2z &= 25 \end{aligned}$$

YOU ANSWERED: 5
56
47

Write the solution as an ordered triple.

$(3, -4, 5)$

19. In 2009, a diabetic express company charged $39.95 for a vial of type A insulin and $30.34 for a vial of type B insulin. If a total of $1425.02 was collected for 40 vials of insulin, how many vials of each type were sold?

The number of vials of type A insulin sold were 22 and the number of vials of type B insulin sold were 18.

YOU ANSWERED: 24
36

20. The sum of three numbers is 8. The first number minus the second plus the third is 4. The first minus the third is 2 more than the second. Find the numbers.

What is the first number? 5

What is the second number? 2

What is the third number? 1

21. A plane flying the 3458-mi from New York City to London has a 60-mph tailwind. The flight's *point of no return* is the point at which the flight time required to return to New York is the same as the time required to continue to London. If the plane's speed in still air is 880 mph, how far is New York from the point of no return?

The distance from New York to the point of no return is 1611 mi.
(Round to the nearest integer.)