MAT1033 Practice 08 Fall of 2020

4.4 Applications of Linear Systems

Solve the problem.

1) The sum of two numbers is 42 and their difference is 2. Find the numbers. 1) _____
A) 22 and 20 B) 22 and 24 C) 20 and 22 D) 41 and 1

2) Find two numbers whose sum is 28 and whose difference is 0. 2) _____
A) 16 and 16 B) 12 and 16 C) 14 and 14 D) 29 and -1

3) A certain number is three times as large as a second number. Their sum is 96. What are the two numbers? 3) _____
A) 75 and 21 B) 24 and 72 C) 22 and 66 D) 22 and 74

4) One number is five times larger than another. The difference of the numbers is 56. Find the numbers. 4) _____
A) 14 and 70 B) 12 and 72 C) 67 and 11 D) 12 and 60

5) Regrind, Inc. regrinds used typewriter platens. The cost per platen is $2.40. The fixed cost to run the grinding machine is $440 per day. If the company sells the reground platens for $7.40, how many must be reground daily to break even? 5) _____
A) 44 platens B) 183 platens C) 58 platens D) 88 platens

6) Northwest Molded molds plastic handles which cost $1.00 per handle to mold. The fixed cost to run the molding machine is $4638 per week. If the company sells the handles for $4.00 each, how many handles must be molded weekly to break even? 6) _____
A) 4638 handles B) 1546 handles C) 1030 handles D) 927 handles

7) Joe has a collection of nickels and dimes that is worth $7.30. If the number of dimes were doubled and the number of nickels were increased by 5, the value of the coins would be $13.15. How many dimes does he have? 7) _____
A) 56 dimes B) 34 dimes C) 28 dimes D) 5 dimes

8) Mrs. Boyd has a desk full of quarters and nickels. If she has a total of 17 coins with a total face value of $3.05, how many of the coins are nickels? 8) _____
A) 8 nickels B) 6 nickels C) 11 nickels D) 16 nickels

9) Anne and Nancy use a metal alloy that is 21% copper to make jewelry. How many ounces of an alloy that is 18% copper must be mixed with an alloy that is 23% copper to form 65 ounces of the desired alloy? 9) _____
A) 28 ounces B) 26 ounces C) 39 ounces D) 44 ounces

10) How many liters of a 50% alcohol solution must be mixed with 60 liters of a 70% solution to get a 60% solution? 10) _____
A) 60 L B) 12 L C) 120 L D) 6 L

11) In a chemistry class, 6 liters of a 4% silver iodide solution must be mixed with a 10% solution to get a 6% solution. How many liters of the 10% solution are needed? 11) _____
A) 2.0 L B) 3.0 L C) 6.0 L D) 4.0 L

Answer Key
Testname: PRACTICE08A

1) A
2) C
3) B
4) A
5) D
6) B
7) A
8) B
9) B
10) A
11) B