

Name:

ILP#:_____ Due:_____

Turn in with your Unit 3 Assignment if your instructor accepts Activities

Math A Unit 3 Activity – Mixture Problems – 10 points

You may get help from each other, the textbook, tutors, or any others.

To receive full credit for problems 1) to 4), you must:

a) State your variables and what they stand for, including units.

Ex. $x = \text{price of towel}$ (\$)

b) Write two equations using the variables you stated.

c) Solve the system of equations using the method of your choice.

d) State your answer to the question asked, including units.

Ex. The price of a towel is \$5.

1) The cost of two bath towels and three washcloths is \$26. The cost of three bath towels and two washcloths is \$29. Find the price of a single bath towel and the price of a single washcloth.

2) Jayden bought four shirts and three pairs of pants for \$200. His brother bought two shirts and two pairs of pants for \$116. How much did a pair of pants cost? How much did a shirt cost?

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3) The perimeter of a rectangle is 36 inches. If the length is 4 inches longer than the width, find the dimensions of the rectangle.

4) The perimeter of a rectangle is 42 feet. The length of the rectangle is six feet more than twice the width. Find the dimensions of the rectangle.

5) The Sailors and the Coconuts – 2 points extra credit. You do not have to set up any equations to solve it, but be sure to show your work on how you did solve it.

Three sailors land on an island where they find a pile of whole coconuts and a monkey. They agree to sleep overnight and divide up the pile of coconuts in the morning. During the night, one sailor wakes up, gives one coconut to the monkey, takes the number of whole coconuts that is exactly one-third of what is left, and goes back to sleep. Then the second sailor awakens and does the same. Later, the third sailor wakes up and also does the same. In the morning, there are fewer than 10 coconuts left. Each sailor takes a number of whole coconuts that is exactly one-third of what is in the pile. How many coconuts were in the original pile?