MATH 01 - Arithmetic, Sec. A

## Third test. Time allowed: one hour.   Professor Luis Fernández

NAME:_____

INSTRUCTIONS: Solve the following 22 exercises. Each is worth 5 points. **You must show all your work** in order to receive any credit. This includes all **sums**, **long divisions**, etc.

1. How much is 13% of 45?

2. How much is 121% of 30?

3. What percent of 20 is 5?

4. What percent of 25 is 32?

5. 20% of what number is 10?

6. 12% of what number is 15?

7. How much is $\dfrac{3}{4}$ of 28?

8. Peter bought 6 toy cars for $33. How much do 11 cars cost?

9. An ice cream factory makes 68 quarts of ice cream in 2 hours. How many quarts could be made in 15 hours?

10. The dosage of a certain medication is 5 ounces for every 60 pounds of body weight. How many ounces of the medication are required for a person who weighs 168 pounds?

11. In the following triangles, $\angle A = \angle A'$, $\angle B = \angle B'$, and $\angle C = \angle C'$. Given the lengths in the picture, find the values of x and y.
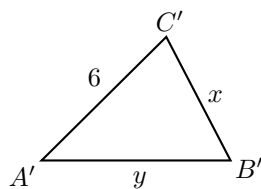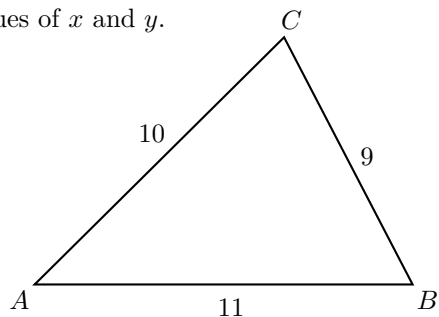
12. Evaluate $3x + 5$ when $x = 5$

13. Evaluate $\dfrac{x + 3y}{2xy}$ when $x = -2$ and $y = 3$.

14. Given the formula $P = nRT$,
find P when $n = 10$, $R = 2$, $T = 3$.

15. Given the formula $F = \dfrac{9}{5}C + 32$,
find F when $C = 35$.

16. Suppose that $f(x) = 2x + 4$. Find $f(2)$.

17. Suppose that $f(x) = x^2 + 5$. Find $f(-2)$.

18.   Solve the equation $2x + 5 = 15$.

19.   Solve the equation $5x + 3 = 2x + 15$.

20.   Solve the equation $-6x + 6 = 2 - 2x$.

21.   Solve the equation $\dfrac{5x}{3} = 20$.

22.   The formula $P = D(1+r)^t$ gives the amount of money in an investment after t years when the initial invested amount is D dollars and the interest rate is r (r written as a decimal). Find P after 2 years when the initial investment was \$1000, at an interest rate of 10%.