

MAT.0650 - ELEMENTARY ALGEBRA

CHAPTER 2 (Sep, 14)

- **Section 2.1, 2.2, 2.3.** Solve each equation and check your results.

1. $x + 3 = 7$
2. $3x - 9 = 2x$
3. $5x - 3 = 4x + 2$
4. $7x - 5 = 6x - 4$
5. $4(2x + 3) = 7x + 5$
6. $6x = 42$
7. $-6x = 24$
8. $\frac{x}{8} = 3$
9. $\frac{2}{3}x = 18$
10. $5x - 3 = 12$
11. $3 - 5x = 17$
12. $\frac{x}{3} - 5 = 1$
13. $3x + 7 = x - 9$
14. $2x + 7 = 4x - 5$
15. $\frac{11}{4}x - 15 = 5 - \frac{5}{4}x$
16. $3x - 2 + 5x = 7 + 2x + 21$
17. $5(3x - 1) - 6x = 3x - 2$

- **Section 2.4.** Solve for the indicated variable.

1. $V = LWH$ for V .
2. $P = 2L + 2W$ for L .
3. $ax + by = c$ for y .
4. $A = \frac{1}{2}bh$ for h .
5. $A = P + Prt$ for t .
6. $m = \frac{n - p}{p}$ for n .

- **Section 2.5.** Solve the following problems with an equation.

1. The sum of 3 times a number and 7 is 25. What is the number?
2. If the sum of two consecutive integers is 85. Find the two integers.
3. A 25-foot board is cut into two pieces so that the longer piece is one foot more than twice the measure of the shorter one. Find the measurement of each piece.
4. Fives times a number increased by eighteen equals three times the number increased by 6. Find the number.
5. If twice an unknown number is added to thirteen, the sum is twenty-five. Find the the number.
6. When three times an unknown number is subtracted from 20, the result is the unknown number. Find the number.
7. Pearl buys a new car, with a down payment of 15% of the price of the car. The down payment is \$3150. What is the original price of the car?

- **Section 2.6.** Solve and graph the solution set for each inequality.

1. $x - 4 \leq 7$

2. $x + 3 > -2$

3. $4x \geq -12$

4. $-12x < 36$

5. $2x \leq 8x - 3$

6. $4 - 3x > 8$

7. $5x - 2 \leq 4x + 5$

8. $7x + 13 \geq 3x + 19$

9. $4x - 2 < 7x + 16$