

Exponents and Order of Operations (Section 1.8)

1) Simplify. Show your work. $5 - 2(9 \div 3 \cdot 2 - 3^2) - (-2)^4$

Equations: Identities and Contradictions (Sections 2.1, 2.2)

Some equations, like $3 = 7$ or $x + 2 = x + 5$, have no solution and are called **contradictions**. Other equations, like $7 = 7$ or $2x = 2x$, are true for all numbers and are called **identities**.

Solve each of the following and **if a contradiction or identity is found, state this**. Make sure you show each step when solving the equation.

2) $4x - x = 2x + x$

3) $5(x - 7) = 3(x - 2) + 2x$

In order to receive full credit for problems 4 – 7, you need to:

- a) Define your variables**
- b) Set up your equation(s)**
- c) Solve and show your work**
- d) Identify your final answer using appropriate labels and/or units**

Applications with Percent (Section 2.4)

- 4) Addie has completed 30 hours, which is 24% of the hours she needs to graduate with a bachelor's degree. How many total hours does she need to graduate?

Word Problems (Section 2.5)

- 5) The second angle of a triangular kite is four times as large as the first. The third angle is 5° more than the sum of the other two angles. Find the measure of the second angle.

6) Laura paid \$219.45, including 5% tax, for a printer. How much did the printer itself cost?

7) Fine Line Trucks rents an 18-ft truck for \$42 plus 35¢ per mile. Judy needs a truck for one day to deliver a shipment of plants. How far can she drive and stay within a budget of \$70?

Solving a Formula for a Variable (Section 2.3)

8) Solve for q : $p = \frac{r - q}{2}$