

Algebra 2
3.7 – Solving Systems with Substitution

Name: _____
Period: _____

Solve each system algebraically using substitution.

1. $y = 3x + 2$
 $y = -\frac{3}{2}x + 5$
2. $y = 3x + 5$
 $6x + 2y = 8$
3. $y = 2x - 7$
 $2x + 5y = -5$
4. $x + y = 6$
 $x - y = 2$
5. $x - 6y = 12$
 $2x - 3y = -3$
6. $2x - 3y = -6$
 $x + 3y = 15$
7. $30x + 2y = 156$
 $2x + 29y + z = 98$
 $y = 31 - 28z$

Solve each problem using substitution. Remember – You must define your variables!

8. A photography club sells two different types of calendars featuring pictures of birds. The wall calendar sells for \$15, and the desk calendar sells for \$8. Last year, calendars were sold for a total income of \$1481. If they sold a total of 137 calendars, how many wall calendars did the club sell? How many desktop calendars did the club sell?
9. A math test is worth 100 points and has 30 problems. Each problem is worth either 3 points or 4 points. How many 4-point problems are on the test? How many 3-point problems are on the test?

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