Name _____ Date _____

Additional Exercises 2.5
Form I
An Introduction to Problem Solving

Let x represent the number. Write the English phrase as an algebraic expression.

1. The product of eleven and a number, added to thirteen. 1. _____

2. Seven times a number, decreased by fifty-nine. 2. _____

3. The quotient of forty-two and the product of a number and negative seven. 3. _____

4. The product of negative twenty-seven and the sum of a number and twenty-five. 4. _____

5. Twice the sum of a number and negative forty-one. 5. _____

6. The quotient of twenty-five times a number and negative eight. 6. _____

Let x represent the number. (a)Use the given conditions to write an equation. (b) Solve the equation and find the number.

7. Four times a number added to 7 times the number equals 44. Find the number. 7a. _____ b. _____

8. Three-fourths of a number is $\frac{1}{2}$. Find the number in lowest terms. 8a. _____ b. _____

9. The quotient of a number and 42 increased by 7 is 13. Find the number. 9a. _____ b. _____

10. The president of a certain university makes three times as much money as one of the department heads. If the total of their salaries is $180,000, find each person's salary. 10a. _____ b. _____

11. 30 marbles are to be divided into three bags so that the second bag has three times as many marbles as the first bag and the third bag has twice as many marbles as the first bag. If x is the number of marbles in the first bag, find the number of marbles in each bag. 11a. _____ b. _____

12. A promotional deal for long distance phone service charges a $15 basic fee plus $0.05 per minute for all calls. If Joe's phone bill was $55 under this promotional deal, how many minutes of phone calls did he make? (Round to the nearest integer, if necessary.) 12a. _____ b. _____

Name _____ Date _____

Additional Exercises 2.5
Form II
An Introduction to Problem Solving

Let x represent the number. Write the English phrase as an algebraic expression.

1. The sum of eleven and three times a number. 1. _____

2. The product of eight and a number decreased by nine. 2. _____

3. The quotient of seven and nine times a number. 3. _____

4. Fourteen times the difference of a number and five. 4. _____

5. Two subtracted from the quotient of a number and eight. 5. _____

6. Two-fifths of a number increased by three . 6. _____

Let x represent the number. (a)Use the given conditions to write an equation. (b) Solve the equation and find the number.

7. When 3 times a number is subtracted from 7 times the number, the result is 44. Find the number. 7a. _____ b. _____

8. The sum of four times a number and 7 is equal to the difference of twice the number and 8. Find the number. 8a. _____ b. _____

9. Nine times a number decreased by six is the same as three times the number. 9a. _____ b. _____

10. Two angles are complementary if their sum is 90^o. If the measure of the first angle is x^o, and the measure of the second angle is $(3x-2)^o$, find the measure of each angle. 10a. _____ b. _____

11. Rooms in Dormitory A each have 120 square feet of floor space. These rooms have twice as much floor space as each room in Dormitory B. About how much floor space does a room in Dormitory B have? 11a. _____ b. _____

12. A rectangle is twice as long as it is wide. The perimeter is 120 meters. Find the dimensions. 12a. _____ b. _____

Name _____ Date _____

Additional Exercises 2.5
Form III
An Introduction to Problem Solving

Let *x* represent the number. Write the English phrase as an algebraic expression.

1. The product of three-sevenths and a number increased by four. 1. _____

2. Thirteen less four times a number. 2. _____

3. The quotient of 19 and the product of a number and negative two. 3. _____

4. The product of negative eleven and the difference of a number and eight. 4. _____

5. Twice the sum of nine and a number. 5. _____

6. Triple a number increased by forty. . 6. _____

Let *x* represent the number. (a)Use the given conditions to write an equation. (b) Solve the equation and find the number.

7. If 5 times a number is added to –6, the result is equal to 11 times the number. 7a. _____ b. _____

8. Six times the sum of a number and 2 is equal to 48. Find the number. 8a. _____ b. _____

9. Seven times a number increased by five is the same as twice the number increased by ten. 9a. _____ b. _____

10. An isosceles triangle contains two angles of the same measure. If the measure of the third angle is 45º less than the measure of the angles. (Hint: The sum of the angles of a triangle is 180º.) 10a. _____ b. _____

11. There are 18 more sophomores than juniors in an 8 A.M. algebra class. If there are 108 students in this class, find the number of sophomores and the number of juniors in the class. 11a. _____ b. _____

12. The length of a rectangle is five times the width. The perimeter is 144 inches. Find the lengths of each sides. 12a. _____ b. _____