College Algebra Test Chapter 1 Name_____

Find the real solutions, if any, of each equation.

1. $x(x-1)=6$

2. $\frac{2x}{3}-\frac{x}{2}=\frac{5}{12}$

3. $x^4-3x^2-4=0$

4. $\sqrt{2x-5}+2=4$

5. $3x^3+2x^2-12x-8=0$

6. $3x^2-x+1=0$

Solve each inequality. Express your answer using interval notation. Graph the solution set.

7. $-3\leq\frac{3x-4}{2}\leq 6$

8. $|3x+4|<8$

9. $2 + |2x - 5| \geq 9$

10. Going into the final exam, which will count as two tests, Brooke has test scores of 80, 83, 71, 61, and 95. What score does Brooke need on the final in order to have an average score of 80?

11. A coffee house has 20 pounds of a coffee that sells for \$4 per pound. How many pounds of a coffee that sells for \$8 per pound should be mixed with the 20 pounds of \$4-per-pound coffee to obtain a blend that will sell for \$5 per pound? How much of the \$5-per-pound coffee is there to sell?