UNIT 2 • REASONING WITH LINEAR EQUATIONS AND INEQUALITIES Lesson 7: Systems of Linear Equations

Lesson 2.7.2: Solving Systems of Linear Equations by Substitution and Elimination Warm-Up 2.7.2

The Pendleton County School District is trying to decide on a new copier. The purchasing committee has been given quotes on two new machines. One sells for \$20,000 and costs \$0.02 per copy to operate. The other sells for \$17,500, but its operating cost is \$0.025 per copy. Your teacher will give you extra credit for writing a mathematically sound recommendation to the school district on which copier to buy based on the total cost during the first year.

1. The district estimates the number of copies made each year is 515,000. Based on this estimation, which machine would you recommend? Justify your choice with clear mathematics.

2. The superintendent of the district has decided that all forms will be distributed electronically. This will decrease the number of copies made in the district by 6%. Based on this information, does this change your recommendation? Justify your choice with clear mathematics.