

Mid-Chapter Quiz

Lessons 3-1 through 3-3

Solve each system of equations by graphing. (Lesson 3-1)

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|------------------------|-------------------|
| 1. $y = 3x + 10$ | 2. $2x + 3y = 12$ |
| $y = -x + 6$ | $2x - y = 4$ |
| 3. $x = y - 1$ | 4. $10 = -2x + y$ |
| $\frac{1}{3}y = x - 3$ | $-3x = -5y + 1$ |

Solve each system of equations by using either substitution or elimination. (Lesson 3-2)

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|--|----------------------|
| 5. $y = x + 5$ | 6. $2x + 6y = 2$ |
| $x + y = 9$ | $3x + 2y = 10$ |
| 7. $\frac{3}{5}x + \frac{1}{12}y = 24$ | 8. $-x = 16.95 - 7y$ |
| $\frac{1}{9}x - \frac{2}{9}y = 13$ | $4x - 18.3 = -2y$ |

9. **TRAVEL** The busiest airport in the world is Atlanta's Hartsfield International Airport, and the second busiest airport is Chicago's O'Hare International Airport. Together they handled 160 million passengers in 2005. If Hartsfield handled 16 million more passengers than O'Hare, how many were handled by each airport? (Lesson 3-2)

10. **MULTIPLE CHOICE** Shenae spent \$42 on 2 cans of primer and 1 can of paint for her room. If the price of paint p is 150% of the price of primer r , which system of equations can be used to find the price of paint and primer? (Lesson 3-2)

A $p = r + \frac{1}{2}r$ C $r = p + \frac{1}{2}p$
 $p + 2r = 42$ $p + 2p = 42$

B $p = r + 2r$ D $r = p + 2p$
 $p + \frac{1}{2}r = 42$ $p + \frac{1}{2} = 42$

11. **ART** Marta can spend no more than \$225 on the art club's supply of brushes and paint. A box of brushes costs \$7.50 and contains 3 brushes. A box of paint costs \$21.45 and contains 10 tubes of paint. She needs at least 20 brushes and 56 tubes of paint. Graph the region that shows how many packages of each item can be purchased. (Lesson 3-3)

Solve each system of inequalities by graphing. (Lesson 3-3)

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|-----------------|---------------------|
| 12. $y - x > 0$ | 13. $y \geq 3x - 4$ |
| $y + x < 4$ | $y \leq x + 3$ |

14. **MULTIPLE CHOICE** Which graph represents the following system of equations? (Lesson 3-3)

$$\frac{1}{3}x + 2 = y$$

$$4x - 9 = y$$

