Name: _____　　　　　Class:____　　　　Date: _____

1　Solve the system of equations

$$34s \quad - \quad 17t \quad = \quad 680$$
$$24s \quad + \quad 15t \quad = \quad 1884$$

　　using the graphs given below. Verify algebraically that your solution satisfies both equations.
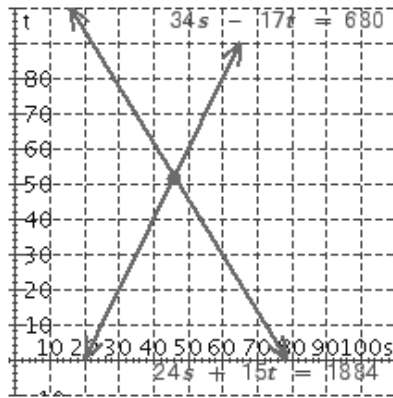
2　Graph the system using the intercept method.

$$2x \quad = \quad y \quad + \quad 4$$
$$8x \quad - \quad 4y = 4$$

　　Identify each system as dependent, inconsistent, or consistent and independent.

3　Yasuo can afford to produce $50x$ bushels of wheat if he can sell them at x cents per bushel, and the market will buy $2100 - 20x$ bushels at x cents per bushel. Find the equilibrium price and the number of bushels of wheat Yasuo can sell at that price.

4　There were 42 passengers on an airplane flight for which the first $-$ class fare was $460 and the tourist fare was $410. The revenue for the flight totaled $144000. Write the algebraic expressions to fill in the table.

	Number of tickets	Cost per ticket	Revenue
First $-$ class	x	$460	?
Tourist	y	$410	?
Total	?	$870	?

5　Use your calculator to solve the system

$$y \quad = \quad -x \quad + \quad 8$$
$$2x \quad + \quad 2y \quad = \quad 4$$

　　If the system is dependent or inconsistent, indicate this.

6 Use linear combinations to solve the system of equations.

$$2u + v = 8$$
$$u - 3v = 4$$

Indicate if the system is dependent or inconsistent.

7 Solve the system by the method of elimination.

$$2x + 3y = 8$$
$$5x - 6y = -7$$

Indicate if the system is dependent or inconsistent.

8 Solve the system by linear combinations.

$$\frac{4}{3}x - y = 4$$
$$x + \frac{1}{2}y = 8$$
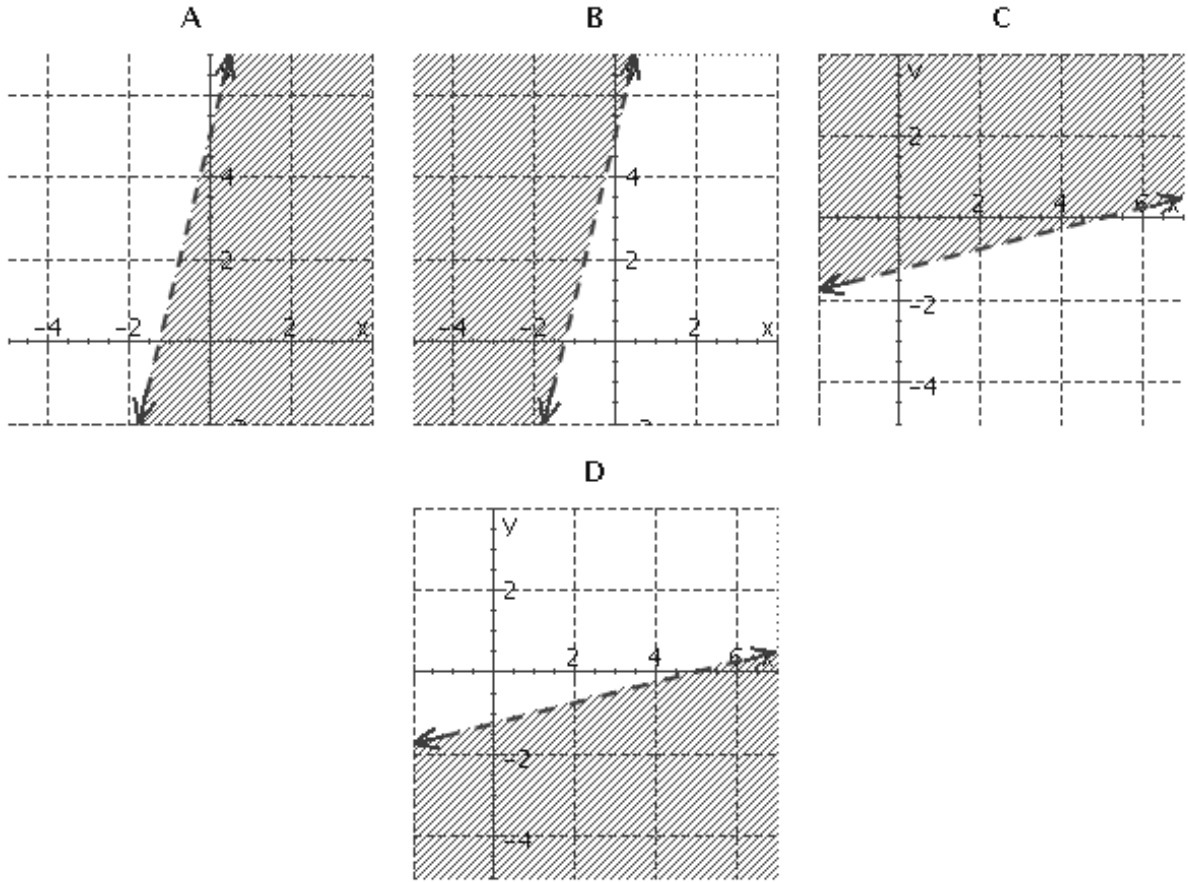
Indicate if the system is dependent or inconsistent.

9 Solve the system.

$$2x - 3 = y$$
$$3y + 9 = 6x$$

Indicate if the system is dependent or inconsistent.

10 Choose the correct graph for the following inequality

$$y > 4x + 5$$

A

B

C

D

11 Find the coordinates of the vertices of the solution of the following system

$$6y - 2x \leq 12$$
$$x + y \leq 10$$
$$x \geq 0, \quad y \geq 0$$

12 The math department is selling old textbooks to raise at least $300 for scholarships. Paperback textbooks will cost $3 and the hardcover textbooks will cost $5. Write a system of three inequalities for the number of paperback and hardback textbooks that must be sold. Let x be the number of paperback textbooks and y be the number of hardcover textbooks.

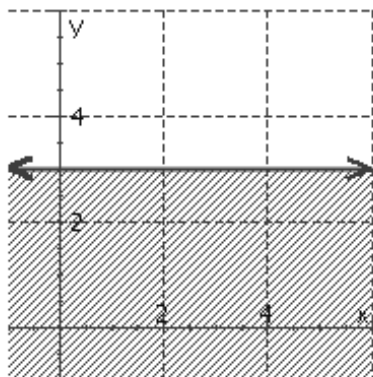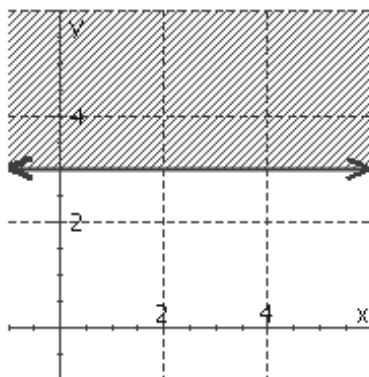**13** Choose the correct graph for the following inequality

$$5x - 3y < 15$$

A

B

C

D
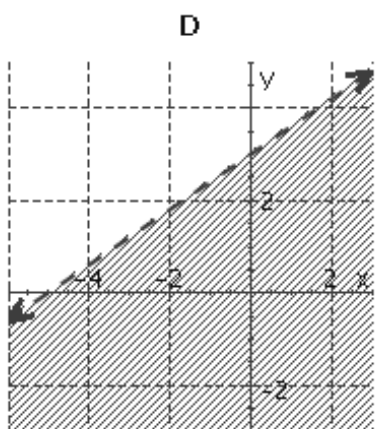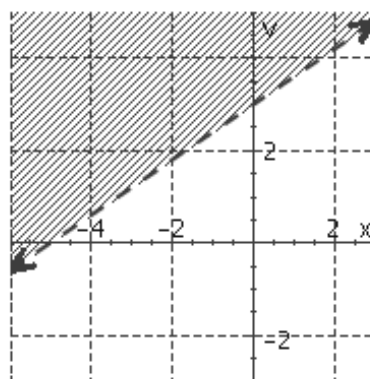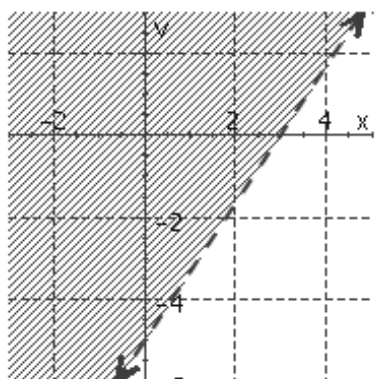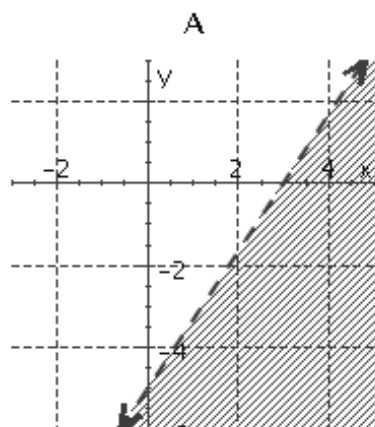
14 Choose the correct graph for the following inequality

$$x \leq 3$$

A	B	C

D

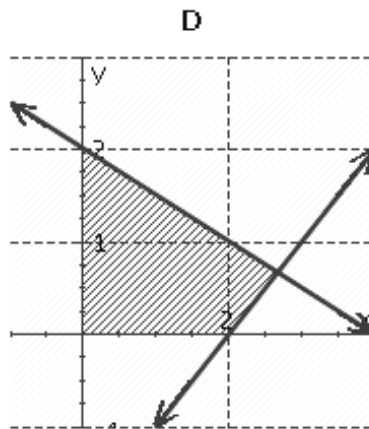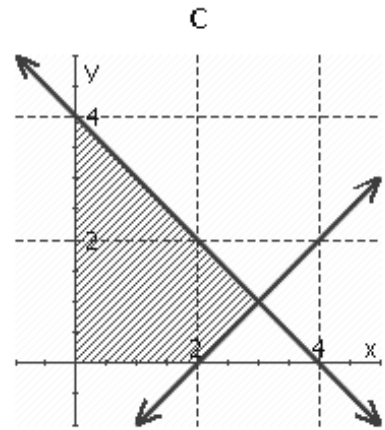Name: _____   Class:____   Date: _____
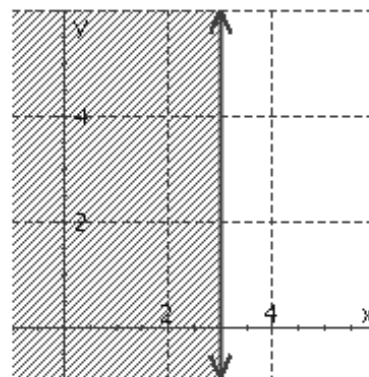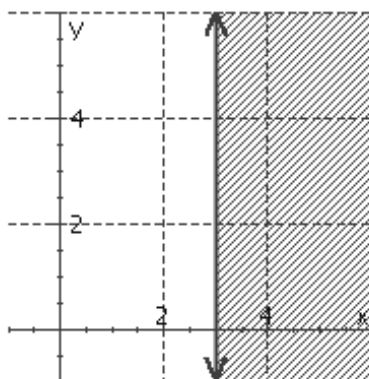
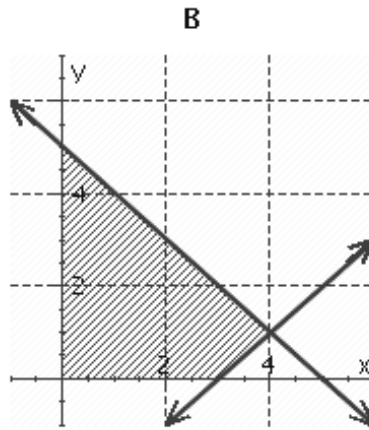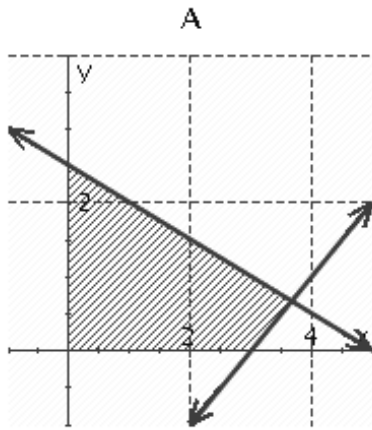**15** Choose the correct graph for the solution of the following system

$$x - y - 2 \leq 0$$
$$x + 2y - 4 \leq 0$$
$$x \geq 0, \quad y \geq 0$$

A

B

C

D

1. (46,52)

2. inconsistent

3. 30,1500

4. 460*x,410*y,x+y,460* x+410*y

5. inconsistent

6. (4,0)

7. (1,2)

8. (6,4)

9. dependent

10. B

11. (0,0), (0, 2), (6, 4), (10, 0)

12. 3*x + 5*y >= 300, x >= 0, y >= 0

13. B

14. C

15. D