**NC Math I Fall 2016 Math 1A EOC Review**

**Unit 1- Solving Equations & Inequalities  
Solve each equation. SHOW YOUR WORK!**

**1. 2. 3. 4.**

**5. 6. 7.**

**Solve each, then graph the solution.**

**8. 9. 10.**



**11. 12. 13.**



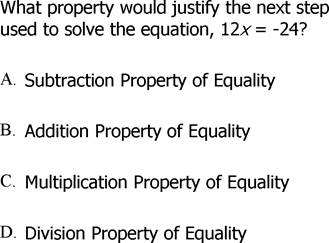
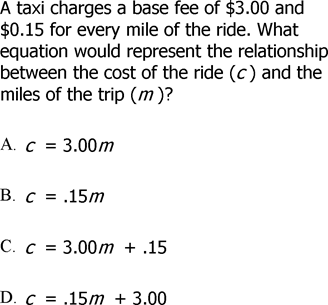
**Solve each for the indicated variable.**

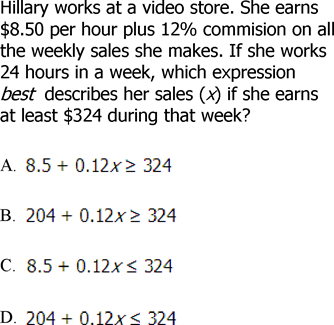
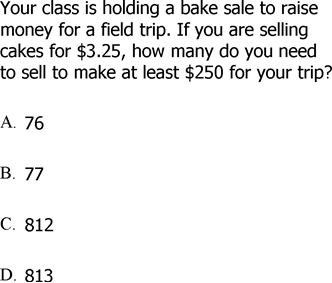
**14. for b 15. for b 16. for d**

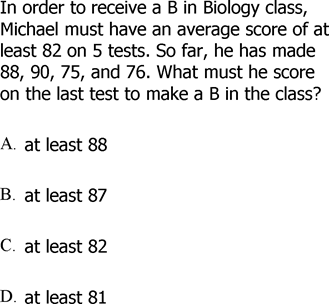
**17. The width of a rectangle is 6 cm less than the length. The perimeter is 72 cm. Write and solve an equation to find the width and the length of the rectangle.**

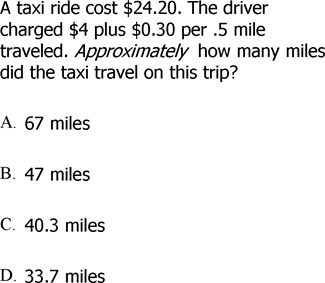
**18. The sum of three even integers is -198. Find the three integers.**

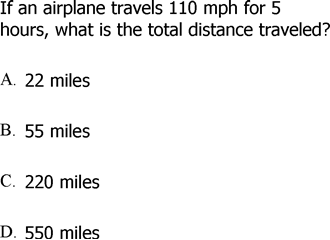
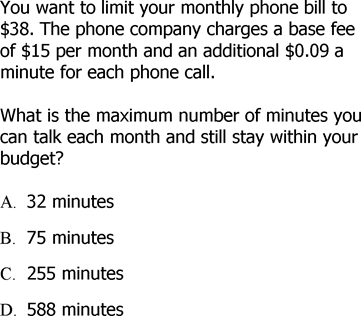
**19. The Great Seto Bridge in Japan is about 7.6 miles long. How long would it take you to cross the bridge if you were walking at 4 mi/h?**

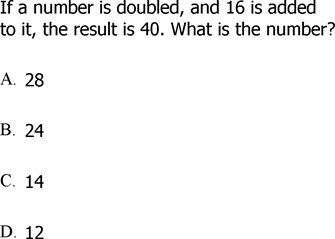
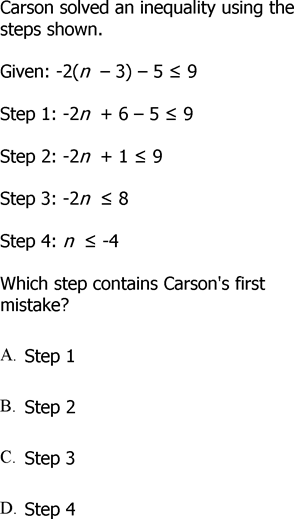
**20. 21.**

**22. 23.**



**24. 25.**

**26. 27.**

  
**28. 29.**

**Unit 2- Functions**

**Find the range of each function when the domain is**

**1. 2. 3.**

**Determine whether each relation is a function.**

|  |  |
| --- | --- |
| **x** | **y** |
| **0** | **1** |
| **1** | **2** |
| **2** | **3** |
| **1** | **4** |

|  |  |
| --- | --- |
| **x** | **Y** |
| **0** | **-2** |
| **2** | **0** |
| **-2** | **-4** |
| **4** | **2** |

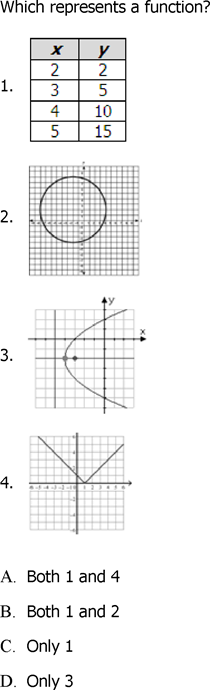
|  |  |
| --- | --- |
| **x** | **y** |
| **2** | **-3** |
| **-1** | **-3** |
| **0** | **-3** |
| **5** | **4** |

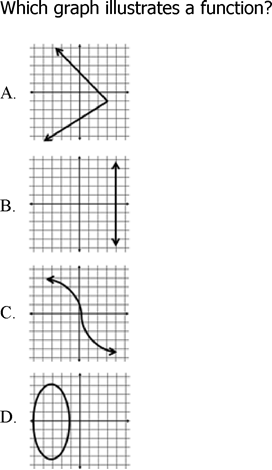
**4. 5. 6.**

**Write a function rule for each table of values.**

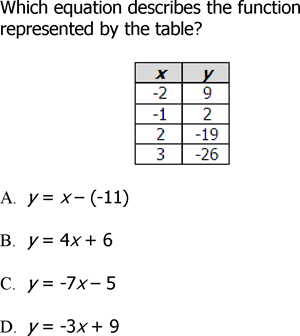
|  |  |
| --- | --- |
| **x** | **y** |
| **0** | **1** |
| **1** | **3** |
| **2** | **5** |
| **-3** | **-5** |

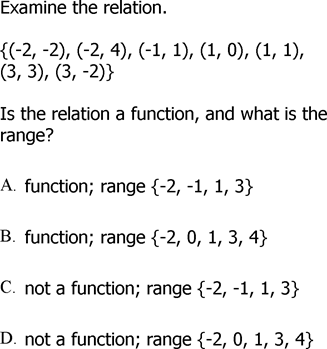
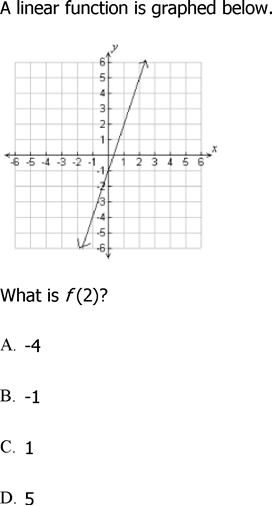
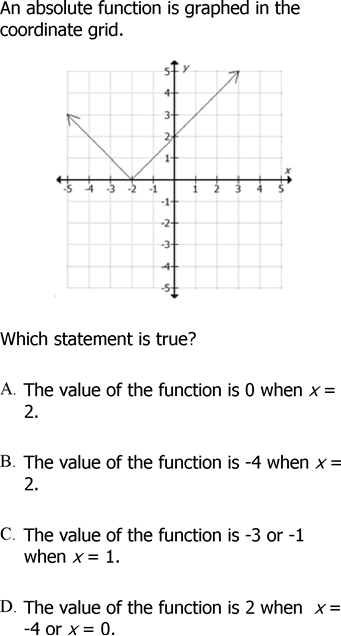
|  |  |
| --- | --- |
| **x** | **f(x)** |
| **0** | **0** |
| **1** | **-4.5** |
| **-1** | **4.5** |
| **2** | **-9** |

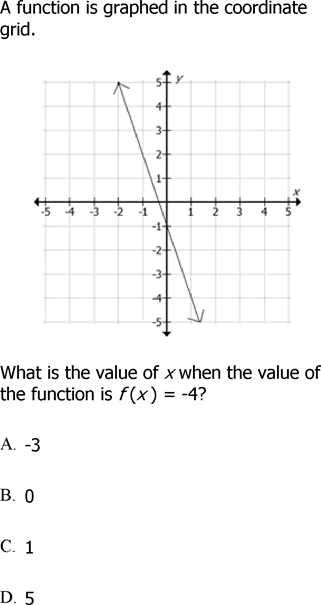
**7. 8. 9.**

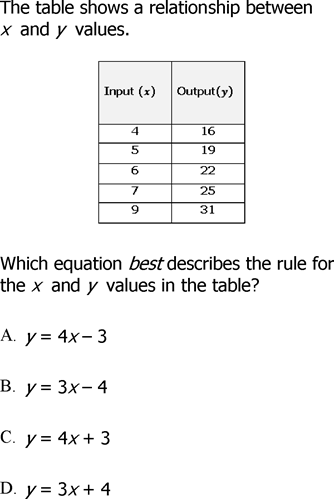
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**10.**

**11. 12.**

**  
  
  
  
  
  
  
13. 14.**

**  
15.**

**  
 16.**

**Unit 3- Linear Equations**

**Find the slope of the line that passes through each pair of points.**

**1. and 2. and 3. and**

**4. Find the x- and y- intercept for the equation:**

**Write an equation of a line that passes through the point with slope m.   
5. 6. 7.**

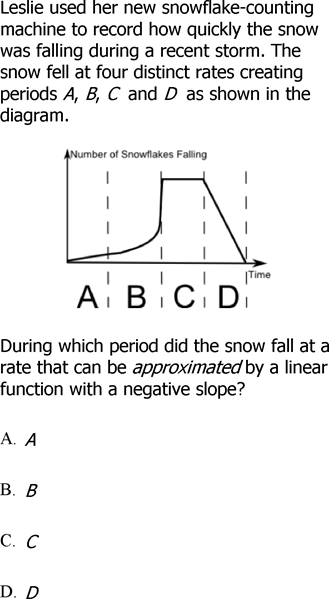
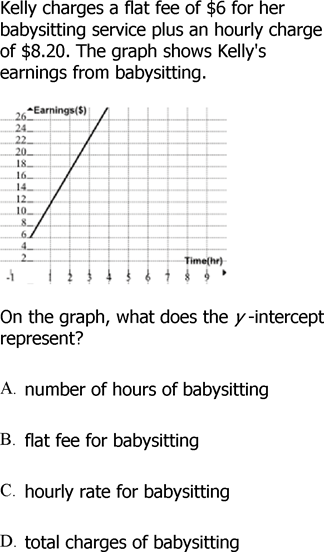
**Write an equation of a line through the given points.**

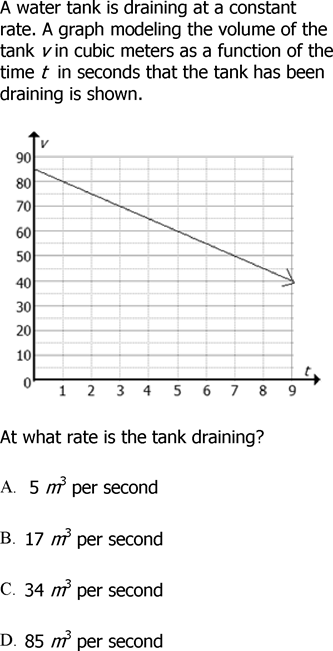
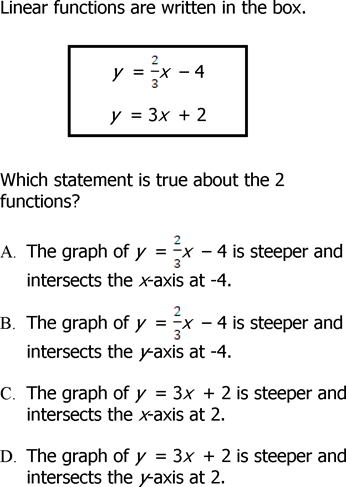
**8. 9. 10.**

**Write an equation for each of the following conditions.**

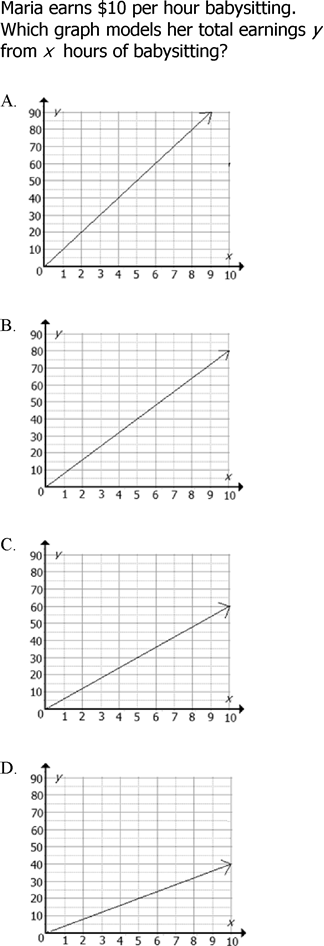
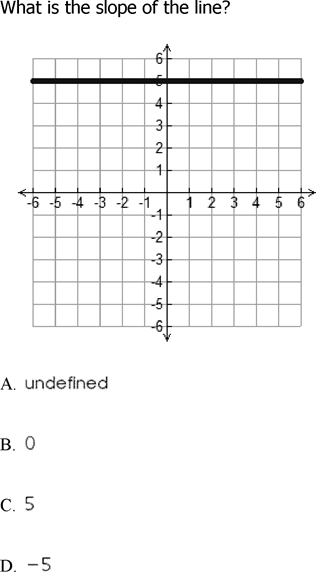
**11. Parallel to through**

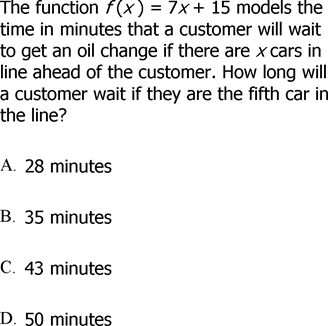
**12. Perpendicular to**

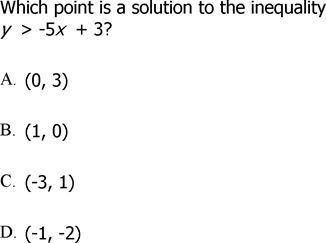
**13. 14.**

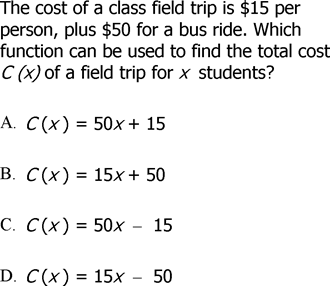
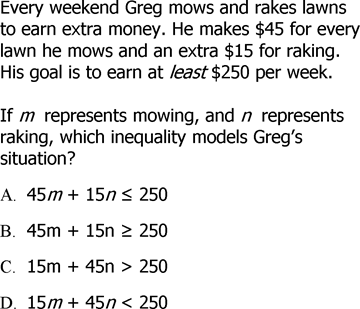
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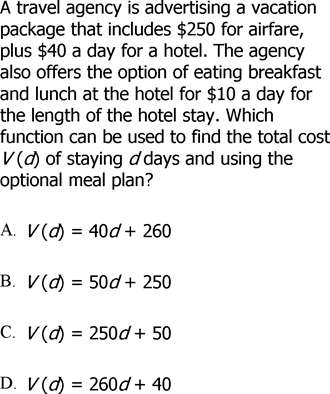
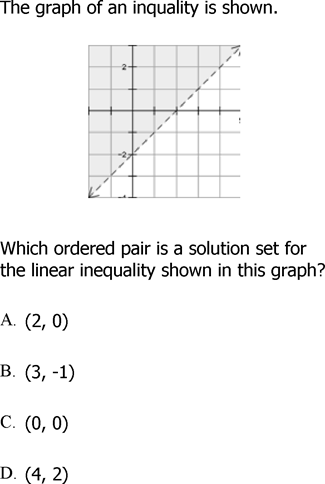
**15. 16.**

**17. 18.**

** 20.**

**  
  
19.**

**21. 22.**

**23. 24.**

**Unit 4- Geometry**

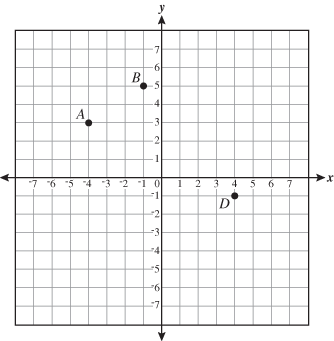
***State the following:***

**Pythagorean Theorem \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Distance Formula \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Midpoint Formula \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

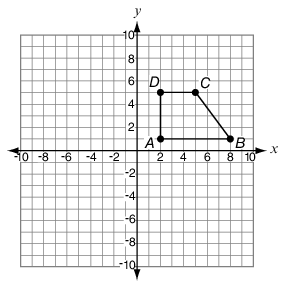
**1. Three vertices of quadrilateral ABCD are as shown below.**

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**In order for ABCD to be a parallelogram, what must be the coordinates of point C?**

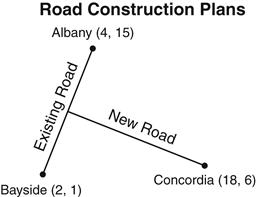
**Point C: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2. What is the perimeter of the quadrilateral shown in the figure below?**

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**Perimeter = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3. The local planning commission has decided to build a new road from the midpoint of**

**Albany and Bayside to the town of Concordia. If the map coordinates listed on the drawing are in miles, what is the length of the new road, in miles?**

**Length of the new road = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**4. The vertices of a quadrilateral are Which  
statement *best* describes Quadrilateral *MNOP*?**

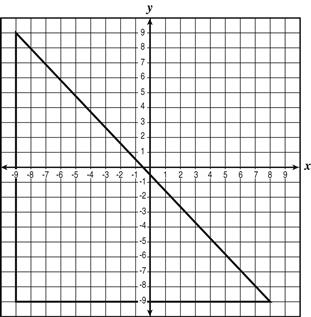
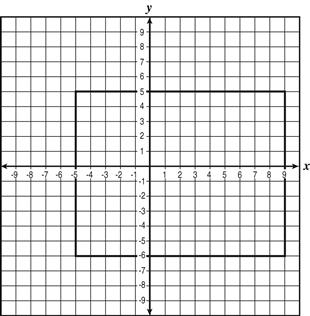
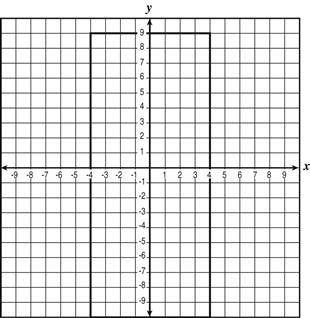
1. **Quadrilateral *MNOP* is a rectangle.**
2. **Quadrilateral *MNOP* is a trapezoid.**
3. **Quadrilateral *MNOP* is a rhombus, but not a square.**
4. **Quadrilateral *MNOP* is a parallelogram, but not a rectangle.**

**5. The vertices of quadrilateral RSTU are located at**

**Which best describes quadrilateral RSTU?**

**A. Square with side length B. Square with side length**

**C. Rectangle with side lengths and   D. Rectangle with side lengths and**

**6. Which of the following polygons has the least (smallest) area?**

**A. B. C.**

**7. Rectangle QRST has two vertices at Q(–9, 5) and R(–7, 7). If the area of rectangle QRST   
 is 16 square units, which could be the coordinates of S?**

**A. (0, 0) B. (–4, 4) C. (–3, 3) D. (–2, 2)**

**8. The coordinates of the midpoint of a line segment are (9, –13). The coordinates of**

**an endpoint of the segment are (–4, 5). What are the coordinates of the other endpoint?**

**eq116526_b1eq116526_a1**

**A. B. C. (14, –21) D. (22, –31)**

**9. A line segment has endpoints at (–3, –5) and (6, 1). In which quadrant does the midpoint  
of the segment lie?**

**A. I B. II C. III D. IV**

**Unit 5 & 6- Systems of Equations & Inequalities**

**1. Is (2,5) a solution of the following system?**

**2. How many solutions does the following system have?**

**Solve each system by graphing.**

**3. 4. 5.**



**Solve each system using substitution.**

**6. 7. 8.**

**Solve each system using elimination.**

**9. 10. 11.**

**12. There are 24 questions on a test. Each question is worth either 4 points or 5 points. The total is 100 points. How many questions of each type are on the test?**

**13. A farmer raises chickens and cows. There are 34 animals in all. The farmer counts 110 legs on these animals. How many of each animal does the farmer have?**

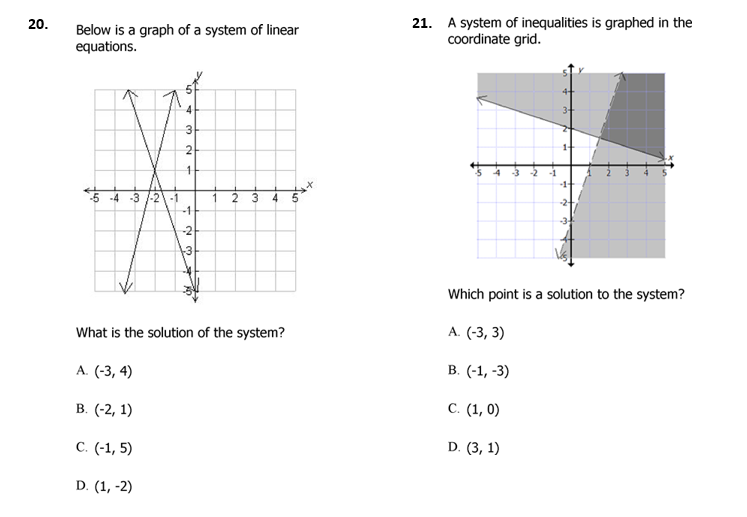
**14. Marcella and Rupert bought some party supplies. Marcella bought 3 packages of balloons and 4 packages of favors for $14.63. Ruper bought 2 packages of balloons and 5 packages of favors for $16.03. Find the price of a package of balloons.**

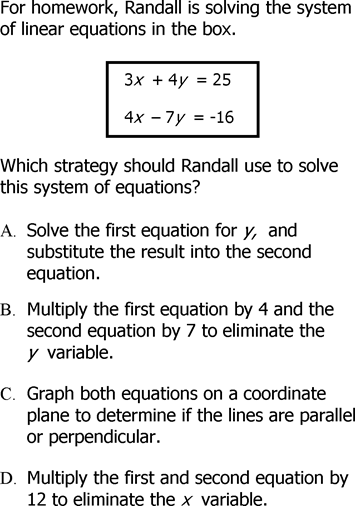
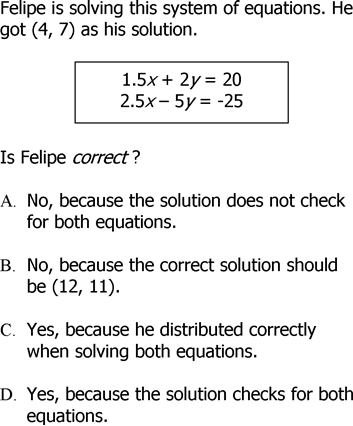
**Graph each linear inequality.   
15. 16.**

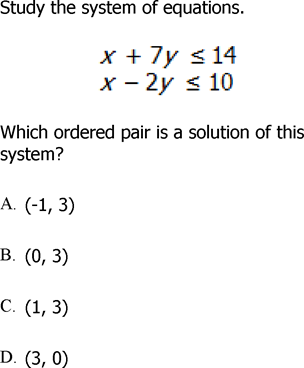


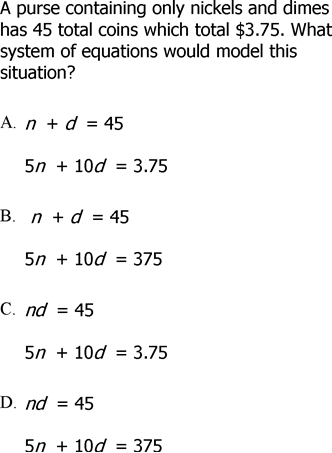
**Solve each system of linear inequalities by graphing.**

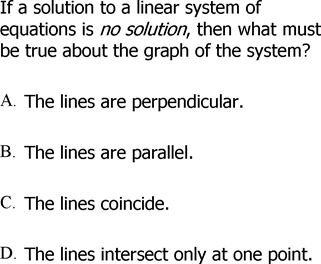
**17. 18. 19.**

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**22. 23.**

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 25.**

**24.**

** 26.**