Name_____Date_____
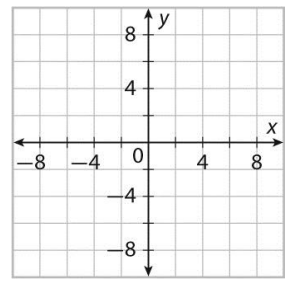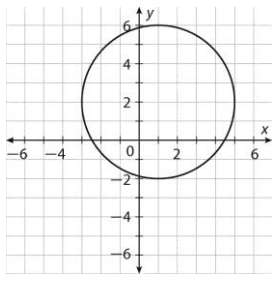
1. Is each of the following a function?

   A (2, 1), (4, 3), (6, 5), (8, 7)

     ○ Yes   ○ No

   B (2, 1), (4, 3), (6, 5), (2, 7)

     ○ Yes   ○ No
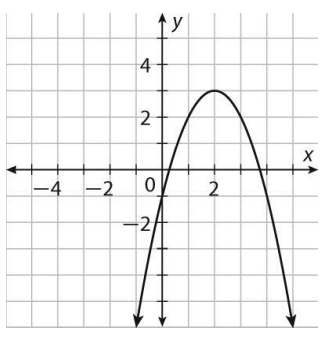
   C (2, 1), (4, 1), (6, 5), (8, 7)

     ○ Yes   ○ No

2. Is the relation represented on the graph below a function? Explain your answer.
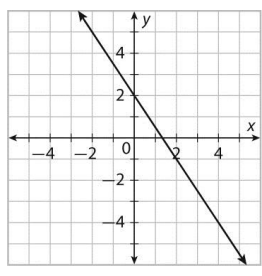

3. The graph of $f(x) = -x^2 + 4x - 1$ is below.

Find the value of $f(x)$ when $x = 0$.

4. Solve for z: $\frac{5z+30}{3} = 2y$

5. Write an equation for the line.

6. Graph the inequality $y > -\frac{1}{2}x + 4$.

7. Kurt works at a cafe and earns $16 per hour. On Wednesday, he worked t hours at the cafe, and his neighbor paid him $5 per hour to babysit for b hours. Which expression best represents the amount Kurt earned on Wednesday?

   A $16t + 5$ C $16t + 5b$

   B $16t - 5b$ D $16b + 5t$

8. A cell phone company charges $45 per month for unlimited calls and $0.25 per text message. Another cell phone company charges $0.15 per text message and $70 per month for unlimited calls.

   a. Write an equation to represent the number of text messages sent in a month that would make each plan cost the same amount.

      _____

   b. Solve the equation and interpret the solution.

9. Juan is making birdhouses to sell at a craft show. The cost of making the birdhouses is $80 plus $6.25 per birdhouse. He will sell them for $16 each. Write and solve an inequality to find the number of birdhouses he must sell to make a profit.
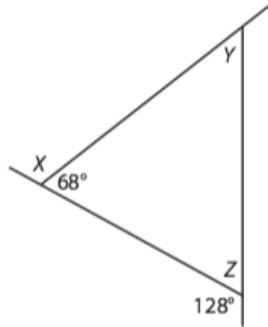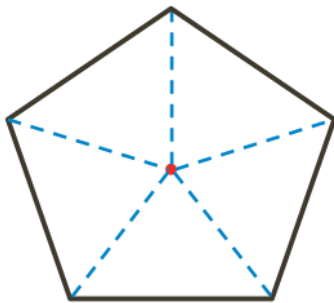
10.

Complete the proof to prove that △ABC ≅ △CDA.

Statements	Reasons
1. ∠ACD ≅ ∠_____	1.
2.	2. Given
3.	3.
4. △ABC ≅ △CDA	4.
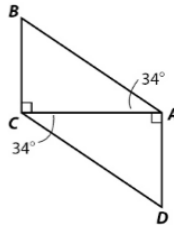
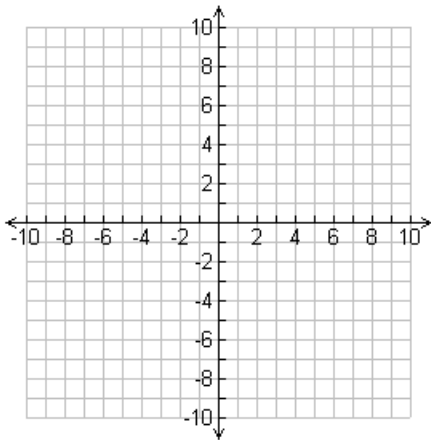11.   Find each angle measure.
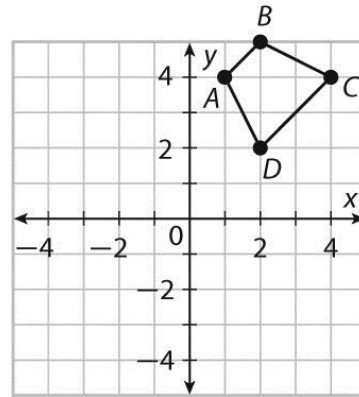

12. Which angle of rotation would map this regular pentagon onto itself?

13. Graph the lines y= 5 and x = 2

14. Rotate the figure 90° counterclockwise.

15. The Fresh and Green Company has a savings plan for employees. If an employee makes an initial deposit of $1000, the company pays 8% interest compounded quarterly.

Write an exponential function that models the compound interest of this company.