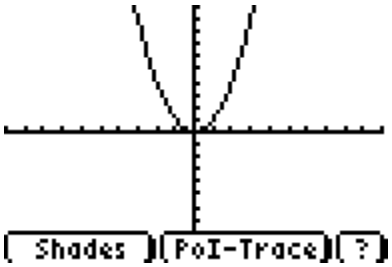
1. For the relation f = { (-1, 4), (2, 7), (3, 7)}

i) State the domain.

ii) Is this relation a function?

2. Is the relation in the graph a function?



3. If g(x) = $\frac{x^2 - 6x + 3}{x + 4}$, find g(-2)

4. If h(x) = $\frac{3 - x}{10}$, find h(a - 3)

5. Which equation is linear?

A. $3x + \frac{2}{3}y = 10$

B. $x^2 + 1 = y$

C. $x^2 + y^2 = 16$

D. $y = \frac{2}{x}$

6. Write $x = \frac{2}{3}y - \frac{1}{3}$ in standard form.

7. What is the slope of a line passing through (-1,4) and (8, -3)?

8. In 1998 the population of Boulder City was 25,991 people. In 2006, the population was 27,905. Find the average population change per year for the city.

9. Identify the pair of parallel lines.

A. $5x+3y=15$ *and* $3x+3y=15$

B. $x+2y=7$ *and* $x=-2y+10$

C. $y=2x+3$ *and* $y=3x+2$

D. $y=3x$ *and* $y=\frac{-1}{3}x$

10. Write an equation in slope-intercept form of the line going through (1, 4) that is perpendicular to $y=\frac{2}{3}x+5$

11. For which equation is the graph a horizontal line?

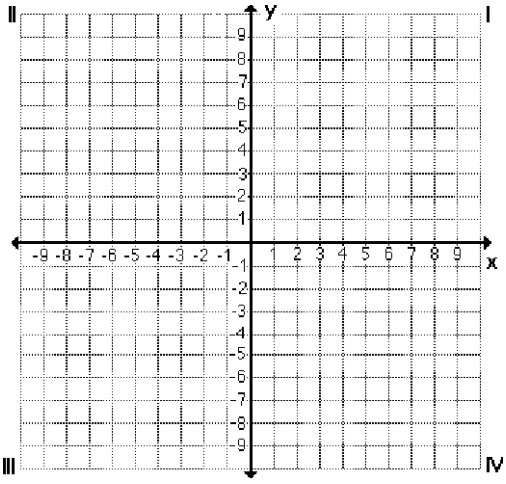
A. x = 6

B. y = 5

C. y = |x+2|

D. y = [x]

12. Graph the equation y = |x + 2| - 3



13. If f(x) = [x] + 9, find f(-1.8) .

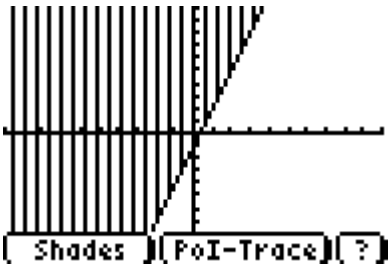
14. Which inequality is graphed?

A. $y>3x-1$

B. $y\geq 3x-1$

C. $y<3x-1$

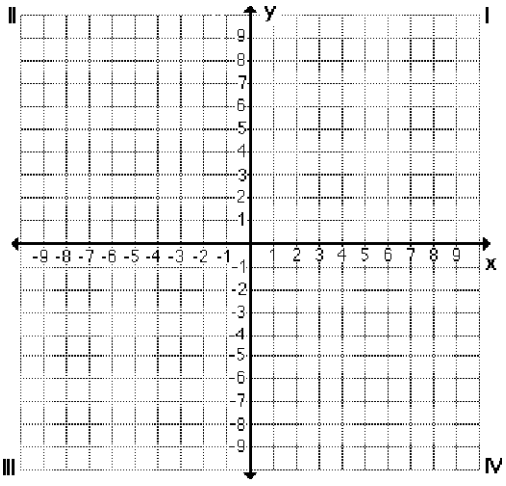
D. $y\leq 3x-1$



15. Write an equation in standard form of the line through (-8, 1) & slope of $\frac{3}{4}$

16. Graph the following piecewise function

$$f(x)=\begin{cases}-3x & x\le -1\\ 3 & -1<x<-2\\ -3x+5 & x\ge 2\end{cases}$$



17. Find the x and y intercepts of the line 2x - 3y = 15.

18. The price paid by a recycling center for aluminum is based on weight. If the weight is between 0 and 1 lb, there is no payment. If the weight is more than 1 lb, but less than 2 lbs, the price is $2.00. For each additional pound the payment increases to a $1.00 per pound. Graph this relation.