1. Order of operations: Simplify $8+3^3-(2-5)^2+\frac{7}{4}\div\frac{3}{8}=$

2. Answer by circling 'true' or 'false' depending on whether the statement is 'right' or 'wrong' (or list the true/false on paper you upload)

a) 5.2222 is an irrational number. True or False

b) $\sqrt{.0081}$ is a rational number. True or False

c) π is an irrational number. True or False

d) All real numbers are rational. True or False

e) The slope of a vertical line is zero. True or False

f) $y=3x^2+9$ is a function. True or False

3. Number Theory.

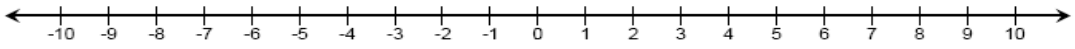
List all the factors of 18.	Find the LCM of 42 and 36.
Find the GCF of 105 and 60.	Express 60 as a product of prime factors: (prime factorize)

4. Solve the equations:

$4(3x - 7) + x = 9 - 2x$	$\frac{2}{7x} = \frac{5}{6}$

5. Solve the inequality algebraically and also show the solution on the number line.

$5x + 3(x + 1) \geq 2x - 9$



6. Solve the System. Show steps to the solution. Express the solution in the form (a,b).

$5x + 3y = 11$

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

7. Solve the linear application. Be sure to follow the steps of
    - defining variables in terms of the data
    - showing steps in the solution
    - answering the actual question (not just giving the value of x).

350 people attended the opening performance of the FIC marching band. Lower level tickets sold for $50 each and upper level tickets were $40 each. How many of each type of ticket were sold if the gross receipts were $16 000?

8. Consider the function $f(x) = x^2 - 7x + 4$

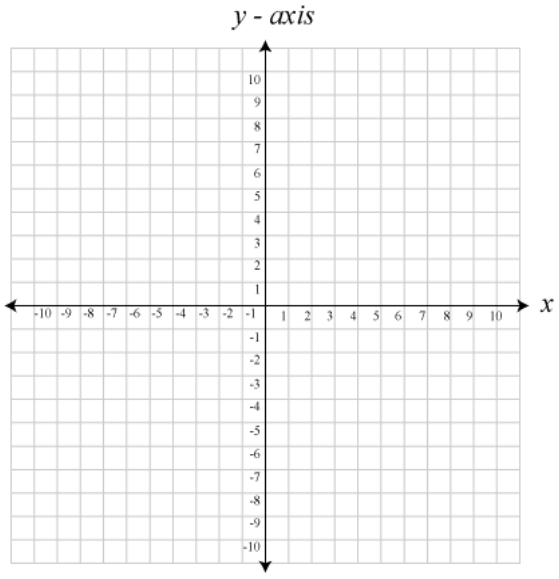
    Evaluate, expressing the solution as simply as possible.

$f(3)$	$f(m + 1)$
$f\left(\frac{1}{2}\right)$	$f(\sqrt{3})$

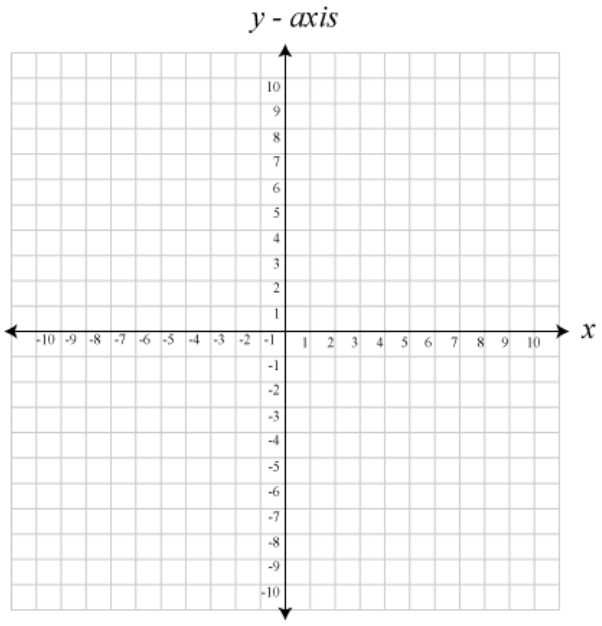
9. Find the equation of each line given data:

Perpendicular to the line $y = 9$ and passes through the point (–10,3)	Parallel to the line $y = \frac{-3}{4}x + 1$ passing through the point (2 , –6).

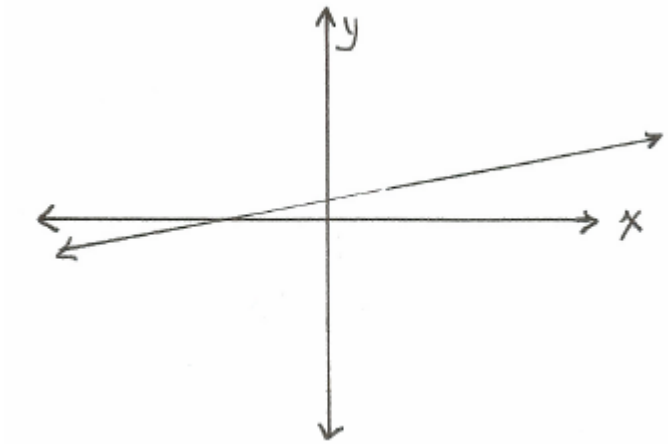
10. Graph.

$y = \frac{-4}{3}x - 5$	

$y \leq \frac{3}{2}x - 4$



10. Circle the function that is represented by the graph.



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