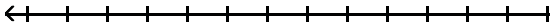
o f , o f to .

1) $|4m + 2| = 8$

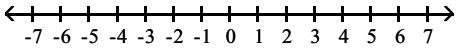
2) $2|x + 7| - 7 = 1$

o f f . f f o to f f
o f to f.

3) $6x - 11 \geq 7x - 23$



4) $14 < -4b + 2 \leq 30$



o f , o f f . f f o to f
f o f to .

5) $|7x - 6| \geq 4$

6) $2|x - 3| < 4$

F f f , f f o f , f
o to f to f .

7) (-8, 2) and (-9, -5)

F f f o f , .

8) $(x + 5)^2 + (y - 1)^2 = 144$

f f f to o f , .

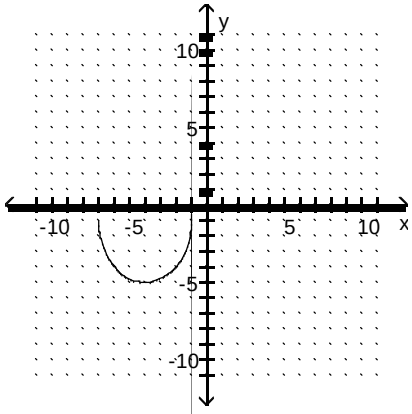
9) Center at (-8, -4), radius $\sqrt{17}$

G f to .

10) x

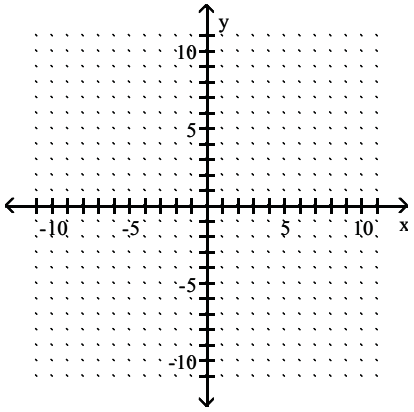
Use the vertical line test to determine whether y is a function of x.

19)

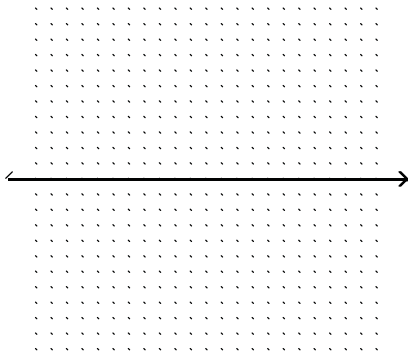


G .

30) $y = -2(x + 8)^2 - 3$



31) $f(x) = \begin{cases} |x| + 4, & \text{for } x < 0 \\ 4, & \text{for } x \geq 0 \end{cases}$



f f o f f f o +, .

50) $\frac{9 + 3i}{3 - 7i}$

F o to o f to .

51) $\sqrt{x + 13} = x - 7$

52) $7 + \sqrt{3x} = 1 + x$

f to o f o o ___ to o o f o o to .

53) $f(x) = 2x^3 + 6x^2 + 13x - 8$

F o f , o o f o o to .

54) $f(x) = x^4 + 6x^3 + 7x^2 - 6x - 8$

F o to .

55) $x^4 - 256 = 0$

56) $x^2 + 35 = 5x$

57) $k^4 - 13k^2 + 42 = 0$

58) $x^{2/3} - 7x^{1/3} + 10 = 0$

o f o , .

59) $A(x) = -0.015x^3 + 1.05x$ gives the alcohol level in an average person s blood x hrs after drinking 8 oz of 100-proof whiskey. If the level exceeds 1.5 units, a person is legally drunk. Would a person be drunk after 4 hours?

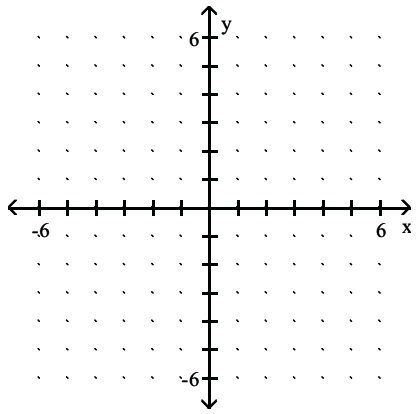
D , f , o o f to . f f - f , f .

60) $f(x) = (x - 2)^2(x + 6)$

61) $x^3 - 3x^2 - 9x + 27$

f f o f o o to .

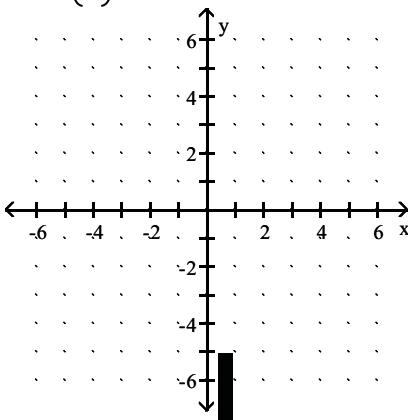
62) $P(x) = -2x(x - 2)^2$



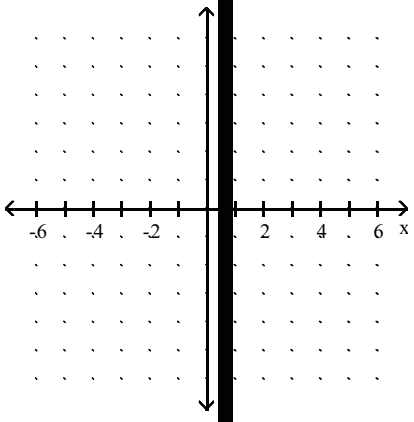
B f , to , o f o f f (f).

63) $f(x) = \frac{x - 2}{x^2 -}$

68) $f(x) = \left(\frac{1}{3}\right)^x + 2$

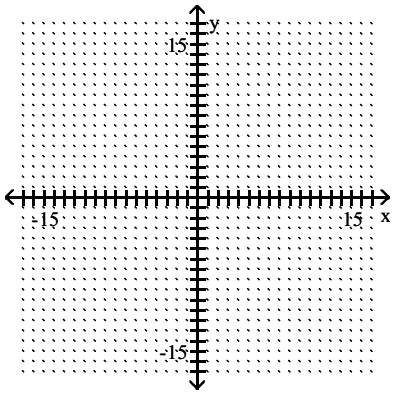


69) $f(x) = \log_2 (x - 1)$

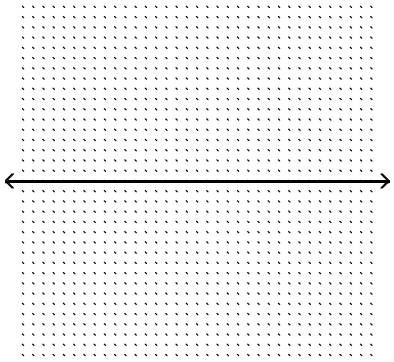


G :

86) $\frac{x^2}{9} + \frac{y^2}{49} = 1$



87) $\frac{(x+1)^2}{9} + \frac{(y-3)^2}{25} = 1$

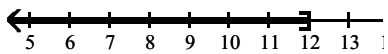


Answer Key
Testname: M125 FINAL REVIEW FALL 2008

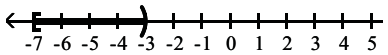
1) $\left\{\frac{3}{2}, -\frac{5}{2}\right\}$

2) $\{-3, -11\}$

3) $(-\infty, 12]$



4) $[-7, -3)$



5) $\left(-\infty, \frac{2}{7}\right] \cup \left[\frac{10}{7}, \infty\right)$

60) Does not cross at (2, 0) , crosses at (-6, 0)
61) Does not cross at (3, 0), crosses at (-3, 0)
62)