MAC 1105

Domain & Range

Determine the domain and range of the relation.

1) {(11, –6), (–9, 4), (1, 3), (–1, 2), (8, –5)}

Find the domain of the function.

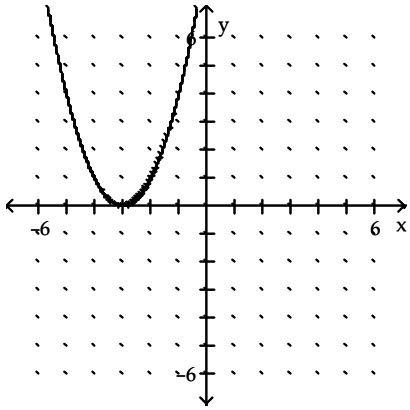
2) $f(x) = 5x^2 + 3x - 1$

3) $f(x) = \sqrt{x-6}+2$

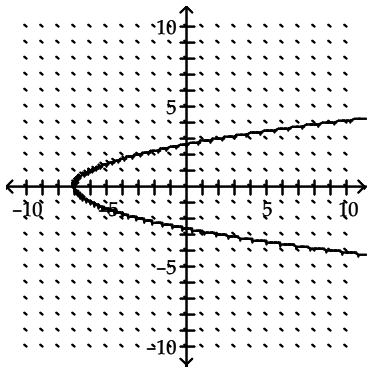
4) $f(x) = \dfrac{1}{x^2 + 3x - 10}$

Find the domain and range of the relation. Assume the ends of the relation continue on.

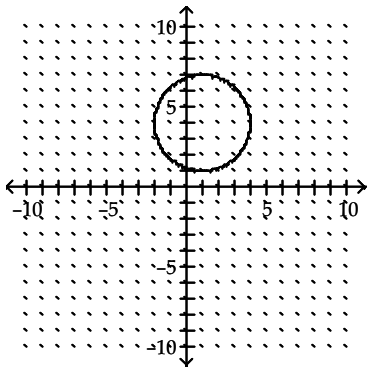
5)



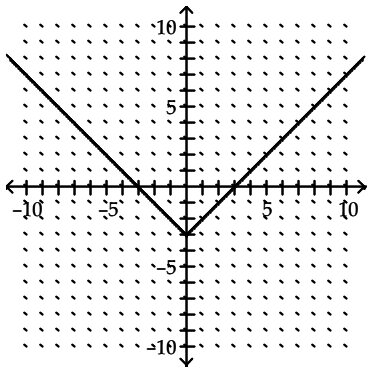
6)



7)



8)



Graph each function using a [–5, 5, –5, 5] window and use the graph to estimate the domain and range.

9) $f(x) = \sqrt{x - 2}$

10) $h(x) = |x| - 4$

Answer Key
Testname: DOMAIN.TST

1) Answer: D = {8, 11, 1, –9, –1}; R = {–5, –6, 3, 4, 2}
2) Answer: $(-\infty, \infty)$
3) Answer: $[6, \infty)$
4) Answer: $(-\infty, -5) \cup (-5, 2) \cup (2, \infty)$
5) Answer: domain $(-\infty, \infty)$; range $[0, \infty)$
6) Answer: domain $[-7, \infty)$; range $(-\infty, \infty)$
7) Answer: domain [–2, 4]; range [1, 7]
8) Answer: domain $(-\infty, \infty)$; range $[-3, \infty)$
9) Answer: Domain = $[2, \infty)$; Range $[0, \infty)$
10) Answer: Domain = $(-\infty, \infty)$; Range =$[-4, \infty)$