

1. (a) ≈ 2.5
(b) ≈ 2.8
(c) -1
(d) -3
(e) DNE

2. discontinuous at $x = 1$ and $x = 2$

3. (a) 7
(b) 1
(c) $-\infty$
(d) ∞
(e) ∞
(f) $\frac{5}{2}$

4. (a) any x ; or $(-\infty, \infty)$
(b) $y \neq 3, -3$; or $(-\infty, -3) \cup (-3, 3) \cup (3, \infty)$

5. -2

6. 3

7. vertical asymptote: $s = 2$
horizontal asymptote: $t = -3$