# Answer Key

Practice • Extrema and End Behavior Form A

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**1)** 0
 1

**2)** 4
 -2
 -4

**3)** $-\infty$
 $\infty$

**4)** $\infty$
 $-\infty$

**5)** negative
 x < 0
 no end
 x → ∞, f(x) → 0

**6A)** Relative maxima
 −2.8
 4.6
 Relative minima
 0
 −5

**6B)** As $x \to -\infty$, $y \to -\infty$ and as $x \to \infty$, $y \to \infty$

**7A)** Relative maxima
 1/2
 4
 Relative minima
 3
 −3

**7B)** As $x \to -\infty$, $y \to -\infty$ and as $x \to \infty$, $y \to \infty$

**8A)** No Relative maxima, minima
 −0.9
 −2.1

**8B)** As $x \to -\infty$, $y \to \infty$ and as $x \to \infty$, $y \to \infty$

**9)** As $r \to \infty$, $V \to \infty$

**10A)** Relative maxima
 (−3.8, 6), (1.8, 3)
 Relative minima
 (0, 2), (5, −6)

**10B)** As $x \to -\infty$, $y \to -\infty$ and as $x \to \infty$, $y \to \infty$

**11)** −2.73
 0.73

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**12)** Relative maxima: x = 1.34; No Relative minima

**13)** partially correct
relative maxima
not a minimum

**14A)** 0
2.5
0
2.5

**14B)** 25
1.25
25

**15)** As $x \to -\infty, \ y \to -\infty$ and as $x \to \infty, \ y \to \infty$

**16)** negative and positive infinity
can be

**17)** increased
0.5

**18)** right to left
left to right