

# Answer Key

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## Practice C

1. 4   2. 3   3. 5   4. no   5. no   6. no
7. no   8.  $f(x) = 2x^4 - 4x^3 - 32x^2 + 64x$
9.  $f(x) = 2x^4 + 58x^2 + 200$
10.  $f(x) = 2x^3 - 12x^2 + 2x + 68$
11.  $f(x) = 2x^3 - 12x^2 + 50x$
12.  $f(x) = 2x^4 - 14x^3 + 38x^2 - 46x + 20$
13.  $f(x) = 2x^6 - 26x^5 + 120x^4 - 200x^3 + 118x^2 - 174x$    14. 7,  $5 + i$ ,  $5 - i$
15. 1, -1,  $2 + \sqrt{3}$ ,  $2 - \sqrt{3}$    16. -3
17.  $2 + i\sqrt{3}$ ,  $2 - i\sqrt{3}$ , -2, 0
18.  $-i$ ,  $i$ ,  $-1 + \sqrt{2}$ ,  $-1 - \sqrt{2}$
19.  $1 + 4i$ ,  $1 - 4i$ ,  $\sqrt{3}$ ,  $-\sqrt{3}$
20.  $R = -315.035t^5 + 5562.592t^4 + 1832.426t^3 - 708,818.278t^2 + 6,449,569.245t + 49,245,170.73$ ; 1993   21. The fifth solution must be a repeated solution because complex solutions come in conjugate pairs.