

Answer Key

Practice B

1. $f(x) = (x + 2)(x + 1)(x - 2)$
2. $f(x) = 2(x + 1)(x - 1)(x - 3)$
3. $f(x) = \frac{1}{2}(x - 2)(x - 3)(x - 4)$
4. $f(x) = -2(x + 1)(x + 3)(x - 2)$
5. $f(x) = \frac{1}{2}(x + 4)(x + 1)(x - 5)$
6. $f(x) = -(x + 2)(x - 4)(x - 6)$
7. $f(x) = 2(x + 1)(x - 3)(x - 4)$
8. $f(x) = -2x(x - 1)(x - 8)$
9. $f(x) = \frac{1}{4}x(x - 3)(x - 9)$

10.

$f(1)$	$f(2)$	$f(3)$	$f(4)$	$f(5)$	$f(6)$	$f(7)$
-1	1	11	35	79	149	251
↙	↙	↙	↙	↙	↙	↙
	2	10	24	44	70	102
	↙	↙	↙	↙	↙	
	8	14	20	26	32	
	↙	↙	↙	↙		
	6	6	6	6		

11.

$f(1)$	$f(2)$	$f(3)$	$f(4)$	$f(5)$	$f(6)$	$f(7)$
-3	5	29	75	149	257	405
↙	↙	↙	↙	↙	↙	↙
	8	24	46	74	108	148
	↙	↙	↙	↙	↙	
	16	22	28	34	40	
	↙	↙	↙	↙		
	6	6	6	6		

12.

$f(1)$	$f(2)$	$f(3)$	$f(4)$	$f(5)$	$f(6)$	$f(7)$
-3	6	33	90	189	342	561
↙	↙	↙	↙	↙	↙	↙
	9	27	57	99	153	219
	↙	↙	↙	↙	↙	
	18	30	42	54	66	
	↙	↙	↙	↙		
	12	12	12	12		

13. $f(x) = x^3 + 2x^2 + x + 1$

14. $f(x) = x^3 - 3x^2 + x - 4$

15. $f(x) = -x^2 + 3x + 2$

16. $f(x) = -x^3 + x^2 - 3x + 2$

17. $M = 0.000127t^3 - 0.00330t^2 + 0.0158t + 9.77$; 13.3 thousand miles