1. $x = 3, x = 1$

3. b

5. a, b

7. 2

9. 3

11. 4

13. degree: 2

even

$$\lim_{x \to -\infty} f(x) = \infty \qquad \lim_{x \to +\infty} f(x) = \infty$$

15. degree: 3

odd

$$\lim_{x \to -\infty} f(x) = \infty \qquad \lim_{x \to \infty} f(x) = -\infty$$

17. $x(x + 7)(x + 6)$

19. $(8x + 1)(8x - 1)$

21. $3x^2 + x - 10$

23. $(1, 3)$

25. $m = 1$