

SM3 24.2 odd answer key

1. $\lim_{x \rightarrow -\infty} f(x) = -\infty$ $\lim_{x \rightarrow -\infty} f(x) = \infty$

2.

3. $\lim_{x \rightarrow -\infty} f(x) = -\infty$ $\lim_{x \rightarrow -\infty} f(x) = \infty$

4.

5. $\lim_{x \rightarrow -\infty} f(x) = -\infty$ $\lim_{x \rightarrow \infty} f(x) = -\infty$

6.

7.

Zero	Multiplicity	Touch/Cross
-1	4	Touch
5	3	Cross

8.

9.

Zero	Multiplicity	Touch/Cross
3	1	Cross
-2	2	Touch

10.

11.

Zero	Multiplicity	Touch/Cross
4	1	Cross
-5	3	Cross
1	2	Touch

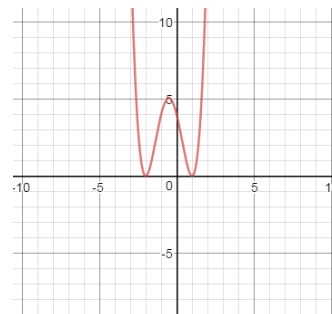
12.

13.

Zero	Multiplicity	Touch/Cross
1	2	Touch
-2	2	Touch

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

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

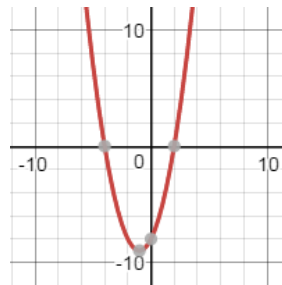


15.

Zero	Multiplicity	Touch/Cross
-4	1	Cross
2	1	Cross

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

$$\lim_{x \rightarrow \infty} f(x) = \infty$$

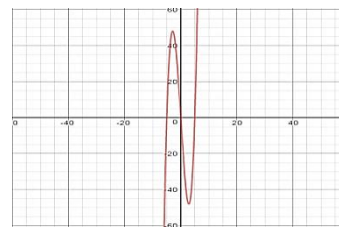


17.

Zero	Multiplicity	Touch/Cross
0	1	Cross
-5	1	Cross
5	1	Cross

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

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



19. $f(x) = (x + 6)^2(x + 3)^2(x - 1)$

21. D

23. C

25. e

27. A, B, C