

**SM3H 1.7 ODD answer key**

1.  $\pm 1, \pm 2, \pm 7, \pm 14, \pm \frac{1}{3}, \pm \frac{2}{3}, \pm \frac{7}{3}, \pm \frac{14}{3}$

3.  $\pm 1, \pm 5, \pm \frac{1}{3}, \pm \frac{5}{3}$  ;  $x = -\frac{5}{3}, 1, -1$

5. It is not a bound.

7. It is a lower bound because signs alternate and  $k \leq 0$ .

9. It is not a bound.

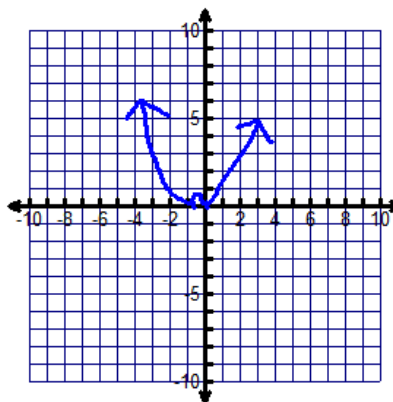
11. *rational*:  $x = \frac{3}{2}$ ; *irrational*:  $x = \pm\sqrt{2}$

13. *rational*:  $x = -3$ ; *irrational*:  $x = 1 \pm \sqrt{3}$

15.

Zeros	Multiplicity	Touch/Cross
0	2	Touch
$-\frac{3}{4}$	2	Touch

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



17.  $(x - 2)(8x + 3)$

19.  $(6x + 5)(36x^2 - 30x + 25)$