

3.2 #9-14, 32-36, 43, 51-54

SPECIAL INSTRUCTIONS FOR #9-14:

- State **leading term**, then write if degree is **even/odd** and if coefficient is **positive or negative**.
- Factor and solve for x-intercepts → **use coordinates**.
- Identify proper graph AND **sketch it** on your hw paper.
- Describe the end behavior of the graph.

CHECK EVEN ANSWERS → 10, 12, 14

(each part is listed in random order)

a) $-x^3$ $-x^4$ $\frac{1}{2}x^6$ odd even even

positive negative negative

b) $(-2, 0)$ $(-2, 0)$ $(0, 0)$ $(0, 0)$ $(0, 0)$
 $(2, 0)$ $(2, 0)$ $(2, 0)$

c) I II IV → be sure to sketch graph!

d)

$$y \rightarrow -\infty \text{ as } x \rightarrow -\infty$$

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$$y \rightarrow \infty \text{ as } x \rightarrow -\infty$$

$$y \rightarrow \infty \text{ as } x \rightarrow -\infty$$

CHECK → 32, 34, 36 $(-4, 0)$ $(-3, 0)$ $(-1, 0)$

$(0, 0)$ $(0, 0)$ $(0, 0)$ $\left(\frac{1}{2}, 0\right)$ $(2, 0)$ $(3, 0)$

CHECK → 32, 34, 36 $(0, 0)$ $(0, 0)$ $(0, 0)$

$(0, 0)$ $(0, 0)$ $(3, -3)$ $(3, -3)$ $(4, 0)$ $\left(\frac{9}{2}, 0\right)$