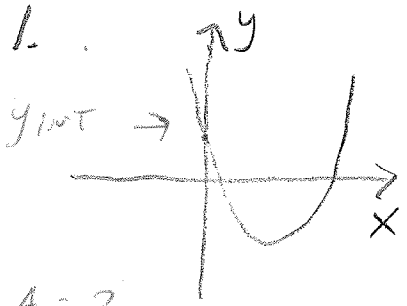
Sheet #320. POLYNOMIALS : LONG-TERM BEHAVIOR & INTERCEPTS

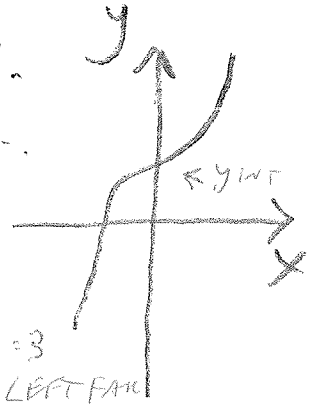
KEY

1.



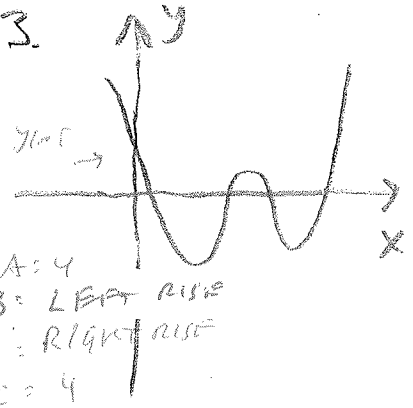
A: 2
B: LEFT RISE
RIGHT RISE
C: 2
D: +

2.



A: 3
B: LEFT FALL
RIGHT RISE
C: 3
D: +

3.



A: 4
B: LEFT RISE
RIGHT RISE
C: 4
D: +

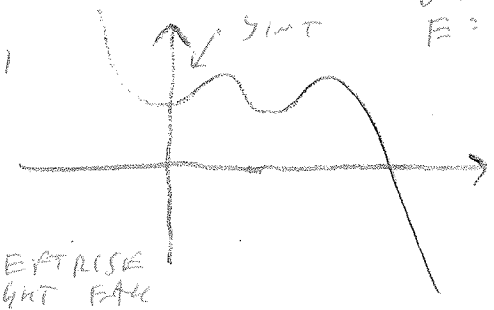
4. $3x^3 + x^2 - 1$

A: 3
B: LEFT FALL
RIGHT RISE
C: 1
D: +
E: -1

5. $(x+1)(x-1)(x+2)(x-3)(x+3)$

A: 5
B: LEFT FALL
C: RIGHT RISE
D: +
E: $1 \cdot -1 \cdot 2 \cdot -3 \cdot 3 = -18$

6.



A: 5
B: LEFT RISE
RIGHT FALL
C: 1
D: −

7. $-x^8 + x^{17} - 3$

A: 17
B: LEFT FALL
RIGHT RISE
C: 1
D: +
E: −3

QUESTIONS

A. STATE SMALLEST POSSIBLE DEGREE

B. RISE OR FALL? a) Left $x \to -\infty$
b) Right $x \to \infty$

C. NUMBER OF X-INTERCEPTS

D. LEADING COEFFICIENT: POSITIVE OR NEGATIVE?

E. Y-INTERCEPT (NUMBER OR PUT ARROW ON GRAPH)