

Unit 5: HW #3

① 0 2 bounces
1 4 bounces
-5 1 Intersects

② 0 1 intersects
-1/3 2 bounces
-7 7 intersects

③ 0 1 Intersects
7 1 Int.
5 1 Int.

④ 0 1 Int.
9 1 Int.
-2 1 Int.

⑤ 0 2 bounces
8 2 bounces

⑥ 0 2 bounces
-5/2 1 Int.

⑦ $f(x) = x^3 - 8x^2 + 5x + 14$

⑧ $f(x) = 4x^7 - 32x^6 + 85x^5 - 75x^4$

⑨ $D: \mathbb{R}$

$R: \mathbb{R}$

max: (1.88, 4.06)

min: (4.79, -8.21)

End: ∞ ; $-\infty$

↑ int: $(-\infty, 1.88)$ (4.78, ∞)

↓ int: (1.88, 4.78)

Zeros: $x = 1, 3, 6$

⑩ $D: \mathbb{R}$

$R: y \leq 3.12$

max: (-3.57, 3.12) (0, 0)

min: (-1.68, -8.64)

End: $-\infty$; $-\infty$

↑ int: $(-\infty, -3.57)$ (1.68, 0)

↓ int: (-3.57, -1.68) (0, ∞)

Zeros: $x = -4, -3, 0$