1. (b) (2.8, 2.4)

2. (a) \( d(x) = -8x + 92 \) (b) \( p(x) = -8x^2 + 92x \) (c) $5.75

3. (a) \( f(t) = \frac{40t + 560}{t + 3} \) (b) 40 kernels

4. (a) 56.2321 feet (b) 8.7115 feet

5. (a) 7.78097245 m/sec (b) Alex is farther south.

6. (a) \( j(t) = 50 + 50 \sin \left( \frac{2\pi}{600}(t - 150) \right) \) (b) 432.109 days

7. (a) \( x = 2 + \frac{9}{2}t, y = 10 - \frac{13}{4}t \) (b) \( x = -5 + 3.6t, y = -5 + 4.8t \) (c) The bison crosses first.

8. (a) \( x = -\frac{17}{6} \) (b) \( j^{-1}(x) = \frac{x - 12}{3} \) (c) \( x = \frac{6 \ln 3 + \ln 2}{3 \ln 2 - 2 \ln 3} \)