

Homework 6 Spring 2023 Final Answers

1. $f(x) = \tan x - \cos x - 2 \sin x - \frac{7}{2}$

2. $f(x) = \frac{x^5}{5} + 2x - \frac{1}{3x^3} - \frac{3}{5}$

3. Answer

The child is rotating her head $\frac{4}{50}$ Radians every second at that moment.



Show all parts of Word Problem
Label All Parts

4. (a) Max Position $s(t_{\max}) = 256$ feet

(b) Velocity at $t = 5$ sec. $\rightarrow v(5) = -32$ ft/sec. Makes sense.
Going Down at $t = 5$ sec

(c) Hits the ground $t_{\text{impact}} = 8$ sec

(d) Balls Velocity at Impact $v(t_{\text{impact}}) = v(8) = -128$ ft./sec.

5. The ball does NOT reach Dan 155 feet up in the tree because its Max Height was only 144 feet.



Show all parts of Word Problem
Label All Parts