

## Problem Set 35

2. 149.299 fathoms/second

4.  $4t^{\frac{1}{2}} + C$

6.  $\frac{3}{2}x^2 + C$

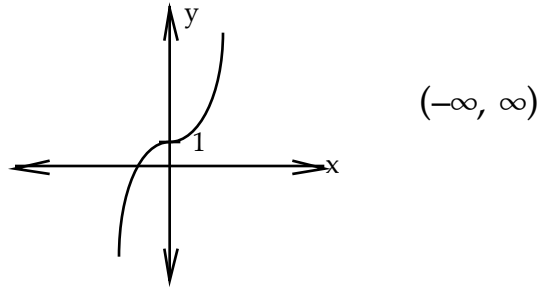
8.  $\frac{du}{dt} = \frac{dv}{dt}$

10. A

12.  $s''(2) \approx 0.857$

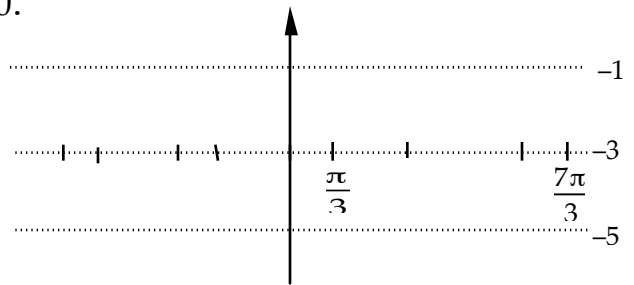
14. 5

16.



18.  $k = 3$

20.



22. Use the definition of the derivative to arrive at  $f'(x) = 6x^2 + 3$

24.  $\frac{25\sqrt{3}}{4}$  square units