

Answers to Week 3

• Section 2.3

1. 8
2. $-\frac{4}{5}$
3. $-\frac{1}{6}$
4. $-\frac{2}{x^2}$
5. $\frac{3}{2}\mathbf{i} + 4\mathbf{j}$
6. 0
7. 5

• Section 2.5

1. (Problems and Answers Vary)
2. Not continuous at $x = 2$ (not removable) and $x = 3$ (removable)
3. Not continuous. Limit = 6 which is not equal to $f(3) = 1$.
4. $k = \frac{3}{4}$
5. $\frac{\sqrt{2}}{2}$.
6. Solution is between $x = 1$ and $x = 2$ by the Intermediate Value Theorem.

• Section 2.6

1. $\frac{5}{3}$
2. 0
3. $\frac{7}{2}$
4. $y = \pm\frac{1}{3}$