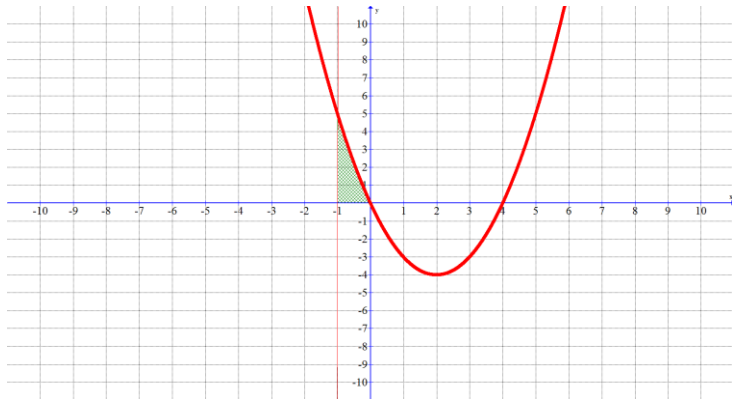


Section 5.5 The Fundamental Theorem of Calculus part 2 (Minimum homework – all odds)

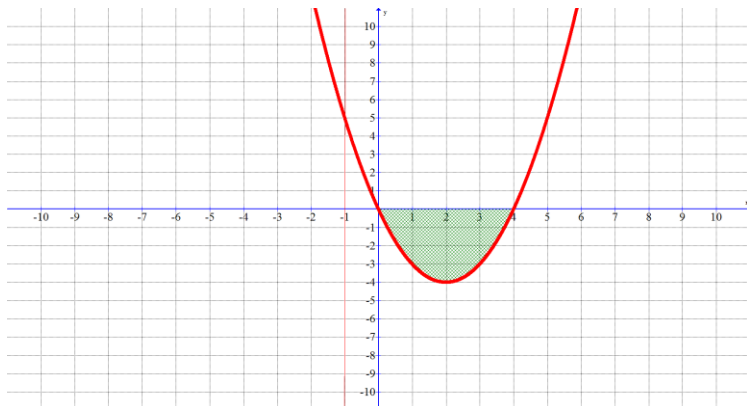
You may use your calculator to find the areas that are needed in problems 1- 4. (round to 2 decimals when needed)

1) The function $f(x) = x^2 - 4x$ is graphed below.

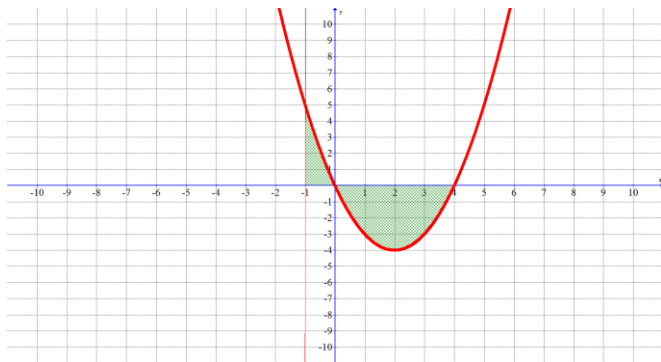
1a) Use integration on your calculator to determine the area shaded below between $x = -1$ and $x = 0$



1b) Use integration on your calculator to determine the area shaded below between $x = 0$ and $x = 4$

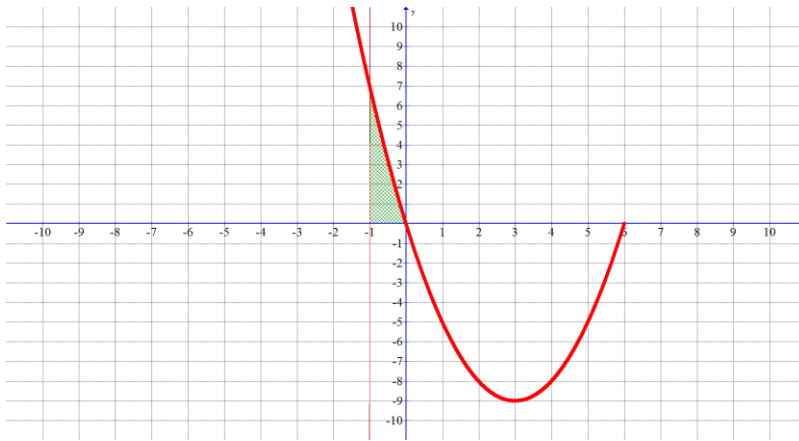


1c) Use integration on your calculator to determine the area shaded below between $x = -1$ and $x = 4$

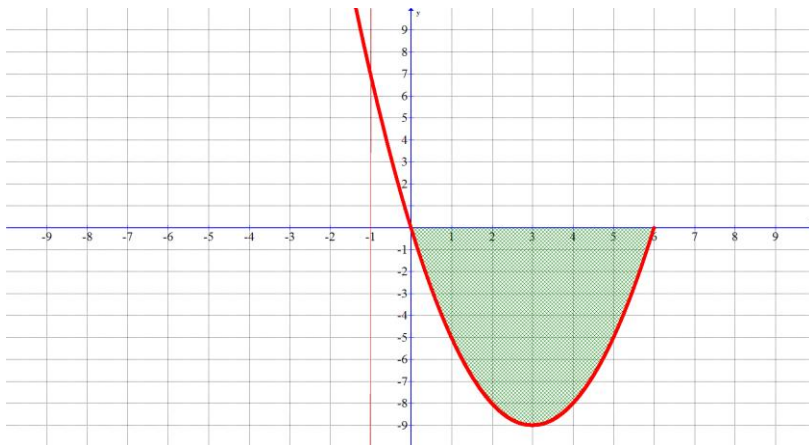


2) The function $f(x) = x^2 - 6x$ is graphed below.

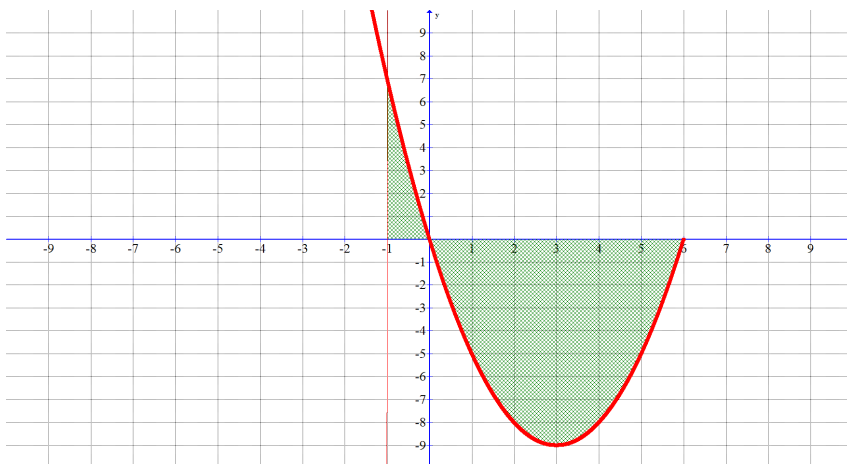
2a) Use integration on your calculator to determine the area shaded below between $x = -1$ and $x = 0$



2b) Use integration on your calculator to determine the area shaded below between $x = 0$ and $x = 6$

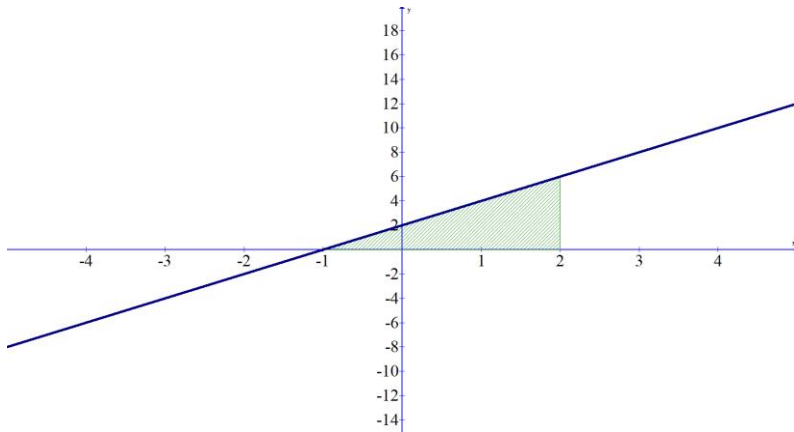


2c) Use integration on your calculator to determine the area shaded below between $x = -1$ and $x = 6$

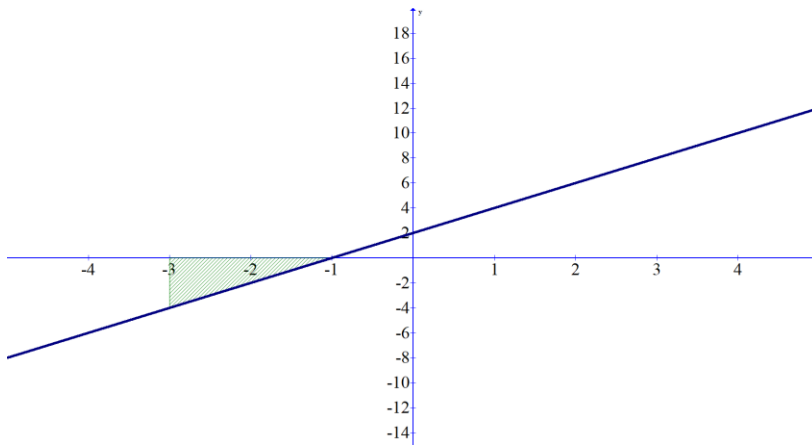


3) The function $f(x) = 2x + 2$ is graphed below

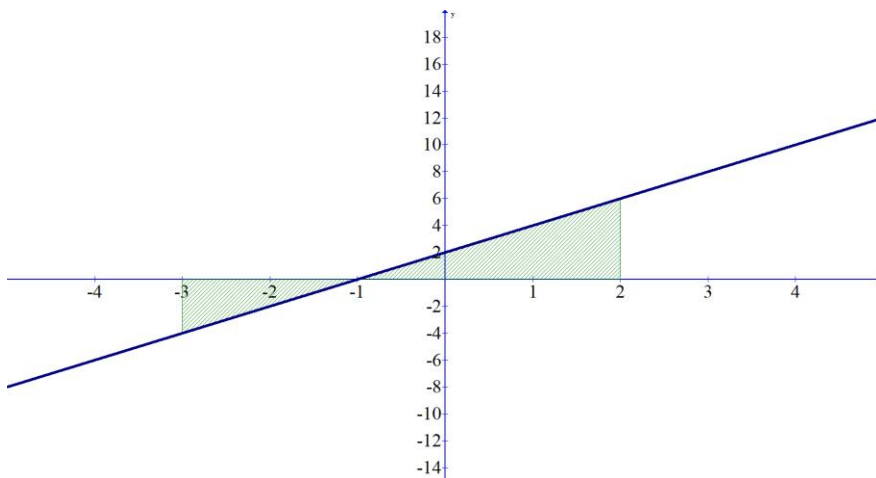
3a) Use integration on your calculator to determine the area shaded below between $x = -1$ and $x = 2$



3b) Use integration on your calculator to determine the area shaded below between $x = -3$ and $x = -1$

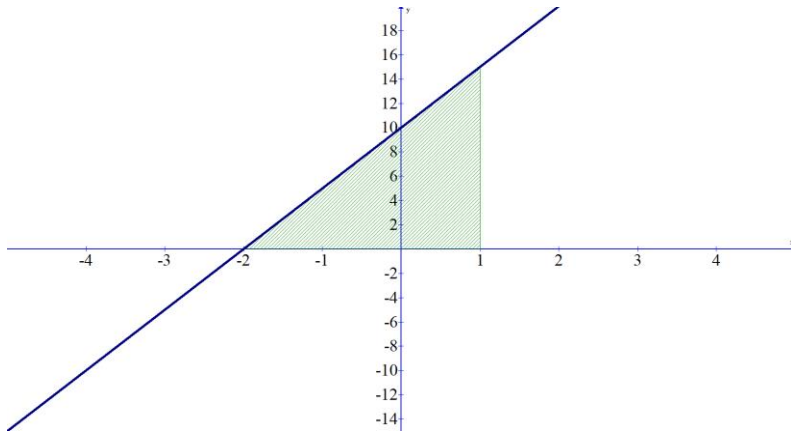


3c) Use integration on your calculator to determine the area shaded below between $x = -3$ and $x = 2$

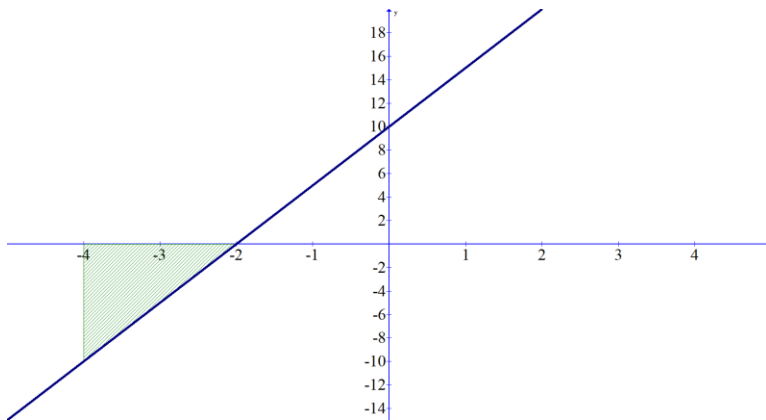


4) The function $f(x) = 5x + 10$ is graphed below

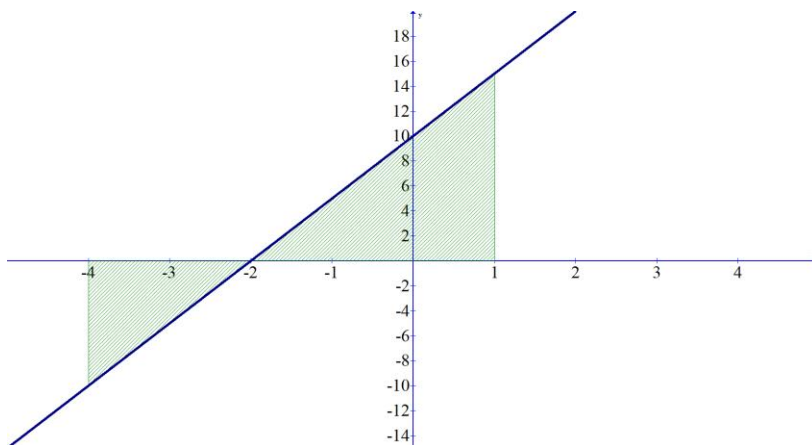
4a) Use integration on your calculator to determine the area shaded below between $x = -2$ and $x = 1$



4b) Use integration on your calculator to determine the area shaded below between $x = -4$ and $x = -2$



4c) Use integration on your calculator to determine the area shaded below between $x = -4$ and $x = 1$



#5 – 12:

a) Sketch a graph of the function $f(x)$ over the given interval $[a, b]$.

b) Find any x-intercept within the interval $[a, b]$.

c) Find the area between the x-axis and $f(x)$ over the interval $[a, b]$ using definite integrals.

5) $f(x) = 2x - 14$; $[4, 8]$

6) $f(x) = 2x - 12$; $[4, 9]$

7) $f(x) = 3x^2 - 3$; $[0, 3]$

8) $f(x) = 3x^2 - 12$; $[0, 4]$

9) $f(x) = 4x^3$; $[-2, 1]$

10) $f(x) = 8x^3$; $[-1, 1]$

11) $f(x) = 3x^2 - 27$; $[-1, 5]$

12) $f(x) = 3x^2 - 48$; $[-1, 5]$