M1B/Schoenbrun Section 6.2 Regions Between Curves

1) Find the area between $-x^2+5$ and $-x+3$

2) Find the area in the 1st quadrant between $y=2x$ and $y=x\sqrt{3x^2+1}$

3) Find the area bounded by $y = \sqrt{\frac{x}{2} + 1}$, $y = \sqrt{1 - x}$ and $y = 0$

Integrate along the *y* axis.

4) Plot the area between $y = x^2$ and $y = |x|$ without breaking up the integral, but instead using geometry.

5) Find the area between $y = \dfrac{x}{\sqrt{x^2+1}}$ and $y = x^4 - x$

You should approximate the intersection of the curves with your calculator.

6) Find the area between x^n and x^{n+1} where $n \in \mathbb{N} = \{1, 2, 3, ...\}$