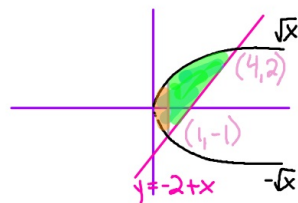


November 7

SWBAT:

Find the area of a
described region

Find the area bound by
the curves
 $x - y^2 = 0$
and
 $x - y = 2$



$$x - y^2 = 0$$

$$-y^2 = -x$$

$$y^2 = x$$

$$y = \sqrt{x}$$

$$y = -\sqrt{x}$$

$$x - y = 2$$

$$-y = 2 - x$$

$$y = -2 + x$$

$$\int_1^4 \sqrt{x} - (-2 + x) dx + \int_0^1 \sqrt{x} - (-\sqrt{x}) dx = 4.5$$

$$x - y^2 = 0$$

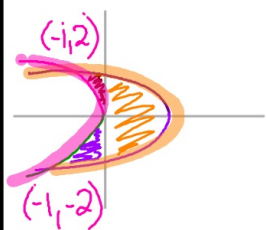
$$x = y^2$$

$$x - y = 2$$

$$x = 2 + y$$

$$\int_{-1}^2 2 + y - y^2 dy = 4.5$$

Find the area bound by
the curves
 $x + y^2 = 3$
and
 $4x + y^2 = 0$



$$\begin{aligned}x + y^2 &= 3 \\x &= 3 - y^2 \\4x + y^2 &= 0 \\x &= -\frac{y^2}{4}\end{aligned}$$

$$\begin{aligned}x + y^2 &= 3 \\-x & \quad -x \\ \hline y^2 &= 3 - x \\y &= \sqrt{3 - x} \\y &= -\sqrt{3 - x}\end{aligned}$$

$$\begin{aligned}4x + y^2 &= 0 \\-4x & \quad -4x \\ \hline y^2 &= -4x \\y &= \sqrt{-4x} \\y &= -\sqrt{-4x}\end{aligned}$$

$$\int_{-2}^2 \left(3 - y^2 - \left(-\frac{y^2}{4} \right) \right) dy = 8$$