Math 1001	Section 1 (Margo)	Assignment $\#6$	Due Oct 30
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1. Find the area between the curves given by their equations:

a) $y = 2\sqrt{x}$ and 2x - 3y = 0; b) $y = 2x^2 + 1$ and x + y = 2; c) $x = y^2 - 4$ and x + y = 2; d) $y = x^2 + 2x$ and $y = 4 - x^2$; e) $x - y^2 = 0$ and $x + y^2 = 6$; f) $y = \frac{4}{x^2}$, y = 4x, and y = x/2;

- 2. Calculate in two way the area bounded by the curves: $y = \sqrt{x}$, y = 0, and x + y = 6. Make sure you have the same numerical answer.
- 3. Find the volume of the solid obtained by revolution about the given axis of the region enclosed by the given curves. Use Disk or Washer methods.
 - a) x + y = 5, xy = 4; x-axis. b) $y = x^{1/2}$, y = 2, x = 0; y-axis. c) $y = e^{2x}$, y = 4, x = 0; x-axis. d) $y = x^2 + 1$, $y = 9 - x^2$; x-axis. e) $y = (x - 2)^2$, y = 4; axis: y = 4. f) $y = x^{1/2}$, y = 0, x = 4; axis: y = 3. g) $x = y^2$, x = 2y; axis y = 2. h) $y = 2x^2$, y = 0, x = 2; y-axis. i) y = x/2, x + y = 6, y = 0; axis x = 6.