Calculus
Chapter 7 – Final Review

Learning Target: I can find the area between curves.

Use Integration to find the area between the given curves.

1) $f(x)=x^2+2x+1$, $g(x)=2x+5$

2) $f(x)=x^2-4x+3$, $g(x)=-x^2+2x+3$

3) $f(x)=(x-1)^3$, $g(x)=x-1$

4) $x=4-y^2$, $x=y-2$

Sketch the graph of the region described and find the area of the region.

5) $y=\sin x, y=\tan x, -\frac{\pi}{3}\le x\le\frac{\pi}{3}$

6) $y=\frac{10}{x}, x=0, y=2, y=10$

7) $y=\sqrt{x}e^x, y=0, x=0, x=1$

8) $y=\frac{4\ln x}{x}, y=0, x=5$

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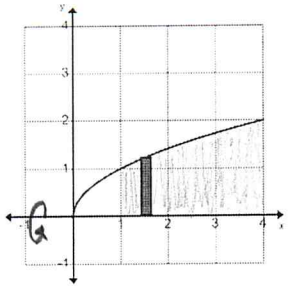
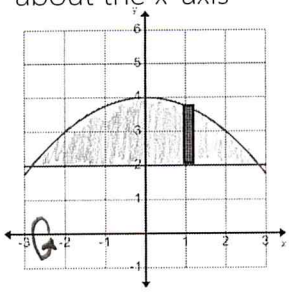
Learning Target: I can find the volume of a solid of revolution.

Find the volume of the solid generated by revolving the region bounded by the graphs of the equations about the given lines.

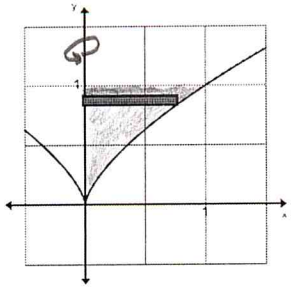
9) $y=\sqrt{x}$
about the x-axis



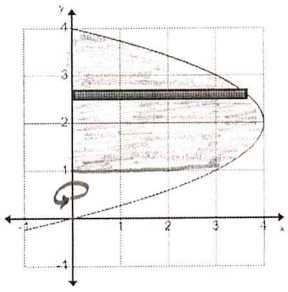
10) $y=2,\ y=4-\frac{x^2}{4}$
about the x-axis



11) $y=x^{2/3}$
about the y-axis



12) $y=1,\ x=-y^2+4y$
about the y-axis



13) $y=x,\ y=0, y=4, x=6$ about the line $x=6$

14) $y=\frac{1}{1+x},\ y=0, x=0, x=3$ about the line $y=4$

15) $y=x^2,\ y=4x-x^2$ about the line $y=6$

16) $y=\sqrt{x},\ y=-\frac{1}{2}x+4, x=0, x=8$ about the line $y=0$