

Name: _____ Date: _____ Pd.: _____

AP Calculus

Area Between Curves WS

Find the area of the region enclosed by the lines and curves.

1) $f(x) = x^2 - 2$ and $h(x) = 2$

2) $f(x) = 2x - x^2$ and $g(x) = -3$

3) $h(x) = 7 - 2x^2$ and $g(x) = x^2 + 4$

4) $k(x) = x^4 - 4x^2 + 4$ and $w(x) = x^2$

5) $x = y^2$ and $x = y + 2$

6) $y^2 - 4x = 4$ and $4x - y = 16$

7) $y = x$, $y = 1$, and $y = \frac{x^2}{4}$

8) $y = x^2$, $x + y = 2$, and the x -axis

9) $m(x) = -x^2 + 3x$ and $w(x) = 2x^3 - x^2 - 5x$

10) $x = 12y^2 - 12y^3$ and $x = 2y^2 - 2y$

Use your calculator to find the area of the region enclosed by the lines and curves.

11) $f(x) = \ln x$ and $h(x) = x^2 - 2$

12) $m(x) = \sqrt{\ln(x^3 + e^{x^2})}$ and $h(x) = -x^2 + 4$