통계1 과제3 2016133 이유진

#1.3

  6(d) $x = \sqrt{4-y^2}$ $(y \geq 0)$

  11(1) 72

  (2) 600

#1.4

  15 $x = \ln(y + \sqrt{y^2+1})$

      $(x + \sqrt{x^2+1} > 0,\ x^2+1 \geq 0,$

      $y + \sqrt{y^2+1} > 0,\ y^2+1 \geq 0)$

#1.6

  13   0

#1.7

  24    $\dfrac{1}{2C}$

#2.1

  14(b) 미분가능

  15   미분가능

#2.2

  3(b) $f'(x) = \frac{1}{2}x^{-\frac{1}{2}} - 2x^{-\frac{2}{3}}$

          $= \dfrac{1}{2\sqrt{x}} - \dfrac{2}{\sqrt[3]{x^2}}$

  18 $y = 2x^2 - 3x + 1$

#2.3

  3(c) $\dfrac{1}{\sqrt{x}} - \dfrac{5}{2}\dfrac{1}{x\sqrt{x}} = \dfrac{2x-5}{2x\sqrt{x}}$

  9 $\begin{cases} y = -\frac{1}{2}x \\ y = -\frac{1}{2}x + \frac{7}{2} \end{cases}$

#2.4

  14(b) 0

#2.5

  5(b) 0

#2.6

  1(a) $\dfrac{1}{5}$

  (b) $\dfrac{2\sqrt{3}}{3}$

  6 $\dfrac{4\sqrt{3}}{3}x - \dfrac{2\sqrt{3}}{3} + \dfrac{\pi}{3}$

#3.1

  4(c) 최대5, 최소1