

MATH 113 Exercise Set 5 - Answer Key

- 1) (a) 2^{11} , (b) 1, (c) 1, (d) 6
- 2) (a) Soln Set= $\{-3, 1\}$, (b) Soln Set= $\{-\frac{11}{4}\}$, (c) Soln Set= $\{1\}$, (d) Soln Set= $\{4\}$,
(e) Soln Set= $\{-1, 5\}$
- 3) (a) Soln Set= $\{2\}$, (b) Soln Set= $\{5\}$, (c) Soln Set= $\{3\}$, (d) Soln Set= $\{-1, 3\}$
- 5) $\ln\left(\sqrt[6]{\frac{x}{y^2z^4}}\right)$
- 6) (a) Soln Set= $\{7\}$, (b) Soln Set= $\{5\}$, (c) Soln Set= $\{5\}$, (d) Soln Set= $\{5\}$
- 7) $\frac{16}{7}$
- 8) 16
- 9) (a) Soln Set= $\{1\}$, (b) Soln Set= $\{1\}$, (c) Soln Set= $\{4.98636\}$
- 10) (a) Soln Set= $\{10\}$, (b) Soln Set= $\{3\}$, (c) Soln Set= $\{\frac{8}{27}\}$, (d) Soln Set= $\{-\frac{5}{3}, 1\}$
- 11) (a) $\frac{1}{4}\left(2\log(a) - \frac{3}{4}\log(b) + \frac{2}{3}\log(c)\right)$, (b) $\frac{3}{2}\log(x) - \frac{3}{4}\log(y)$, (c) $-2x + 1$
- 12) (a) $5\log(102) - 6$, (b) $3\log(125) - 1$

Note: There is no fourth problem :)