

### Answers to Practice Midterm 3

1.  $\frac{9}{8}$
2.  $\frac{2 \ln 5}{\ln 9 + \ln 5}$
3.  $k = .085 = 8.5\%$
4.  $ab = 8$
5.  $\frac{\log_a^3}{3 \log 2}$
6.  $X = \sqrt[3]{10^5} = 10^{\frac{5}{3}}$
7. 56 million
8.  $\frac{\ln 3}{.045} \approx 24 \text{ years}$
9.  $X = 1/4$
10.  $\frac{6}{17}$
11. One solution
12. \$8
13.  $x = \frac{-15}{4}$
14. 6 pounds
15.  $\frac{1}{2}$
16.  $\frac{1}{3} \begin{pmatrix} -5 & 4 \\ 2 & -1 \end{pmatrix}$
17.  $\begin{pmatrix} 7 & -24 \\ 29 & 11 \end{pmatrix}$
18. All except c
19.  $\begin{pmatrix} 0 & -5 \\ -3 & 8 \end{pmatrix}$
20.  $\begin{pmatrix} -10 & 30 \\ 13 & -51 \end{pmatrix}$
21. one solution
22. E
23. No solution
24. a, c, and d
25. See Quiz # 15