

Name _____

University of Baltimore
Math 107: College Mathematics
Homework: Chapter 4.2 & 4.6(B*)

Date _____

BECAUSE THIS IS A GRADED ASSIGNMENT, YOU ARE NOT ALLOWED TO EITHER GIVE OR RECEIVE HELP IN ANSWERING THESE QUESTIONS.

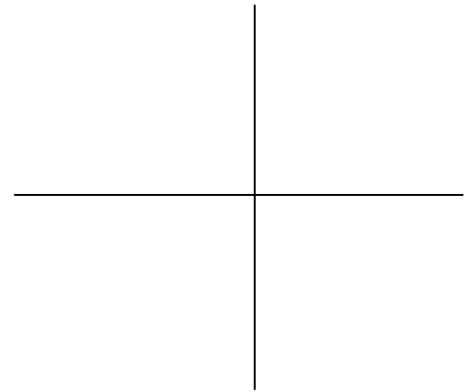
Answer each question as indicated. **Think** first, then write. **Show all your work**, and remember to **check** your answers! If you use scrap paper number your work and hand the scrap paper in. Please place your answers in the spaces provided.

All graphs should include all intercepts labeled with their coordinates and all asymptotes drawn in and labeled with their equations.

1. Given $f(x) = 2^x - \frac{5}{8}x$, find $f(-3)$.

2. Given $g(x) = 16^x$, find $g\left(\frac{3}{2}\right)$.

3. Graph $h(x) = 3^x - 9$ in the space below. Label all intercepts with their coordinates. Indicate the asymptote with a dashed line and label it with its equation.



4. Solve for x : $5^{x-3} = 25^{x+6}$.

5. Money deposited into a long-term earns interest and grows according to the model $A = 5000e^{0.07t}$. Predict the balance in the investment after 12 years. Give both an exact answer and an approximation to the nearest whole number.

exact answer: _____

approximate answer: _____