Exercise 1.
Solve for $x$:
\[ \frac{x^2 - 1}{x} = k \]

Exercise 2.
Solve for $x$ and $y$:
\[ \begin{align*}
2x + y &= 3 \\
x - y &= b
\end{align*} \]

Exercise 3.
Line $B$ has equation $y = 3x + 4$. Line $A$ has twice the slope as line $B$ and passes through the point $(3, -1)$. Find the equation of line $A$ and draw a diagram.

Exercise 4.
Two trains are travelling in the same direction, both starting from New York. The first one leaves New York at 8 am with a constant speed of 40 miles per hour. The second one leaves one hour later and with a constant speed of 70 miles per hour. After how many minutes, would the second train reach the first one?

Draw a diagram representing the position of the two trains at time $t$.

Exercise 5.
You want to build a rectangular box with a volume of 100 cubic feet and with a base of 10 square feet. Express the surface area of the box in terms of the length of one of the sides and sketch its graph.

Exercise 6. Solve for $x$

a) $\log(9 + x) = 3a$

b) $2^x = 6 + b$

c) $\log(x^3) - \log(x^5) = 10$. 
Exercise 7.

On friday morning the stock $A$ increased its value by 10% each hour continuously. If its value at 8am was 30$, after how many minutes did its value reach 40$?