

## MIE237 Math Test

1. Solve the following linear systems.

a.  $2x + 3y = 7$

$x - y = 1$

$$x = 2, y = 1$$

2. Solve for the variable. If there are two roots, pick the smallest.

a.  $x + 4x = 21$

$$x = 5$$

3. Find the vertical and horizontal asymptotes of the following equations.

a.  $g(x) = x - 2$

There is a vertical asymptote at  $x = 1$

4. Solve the following exponential equations:

a.  $5(3 - 2x) = -5x$

$$x = 15$$

5. Given the functions  $f(x) = 2x - 5$  and  $g(x) = 3x + 4$ , evaluate the following:

a.  $f(3) - g(2)$

Answer is -9