a few basic algebra reminders . . . .

1. Find an equation of the line that satisfies the given conditions:
(a) passes through (-1,-1) and (3, 7)

(b) passes through (7, 2) and (5, 2)

(c) passes through (-1, 3) and (-1, 5)

(d) passes through (-2, -6) and is parallel to $y = 2x + 3$.

(e) passes through (4, 2) and is perpendicular to $y = 2x + 3$.

2. Simplify the expression below (no negative exponents, no compound fractions).
(a)

$$\left(\frac{3}{y}\right)^3 \left(\frac{y^2}{4}\right)^{-2}$$

(b)

$$5x^{-2}(-2y^0)^3$$

(c)

$$\frac{\frac{2}{x+2}}{\frac{3}{x-2}}$$

(d)

$$\frac{\frac{x+4}{3}}{\sqrt{x^2+16}}$$

3. Combine into a single logarithmic term.

(a)

$$\ln(x+2) - \ln(x-1)$$

(b)

$$\ln(x+2) - \ln(x-1) + \ln(x+1)$$

(c)

$$\frac{1}{3}\ln x - \frac{1}{2}\ln y - 2\ln z$$

4. Use the logarithm rules to "reverse" the process in #3.

(a)

$$\ln\left(a^2bc^3\right)$$

(b)

$$\ln\left(a^2 - b^2\right)$$

(c)

$$\ln\left(\frac{a^2+b^2}{ab}\right)$$