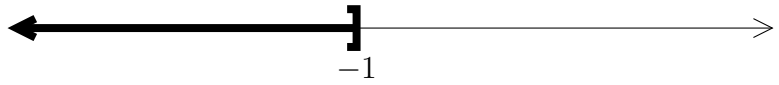
1. **(3 points)** *Draw the interval* $(-\infty, -1]$ *on a number line and express it as an inequality.*



This interval contains all points x such that $x \leq 1$.

2. **(3 points)** *Evaluate the expression* $-2(x+y)+5y$ *for* $x = 2$ *and* $y = -1$.

Substituting 2 in for each x and -1 in for each y:

$$-2(x+y)+5y = -2\left[2+(-1)\right]+5(-1) = -2(1)+(-5) = -7$$

3. **(3 points)** *Evaluate the following three expressions:*

- 3^{-3}.
  $3^{-3} = \frac{1}{3^3}$. Since $3^3 = 3 \cdot 3 \cdot 3$, it follows that
  $$3^{-3} = \frac{1}{3 \cdot 3 \cdot 3} = \frac{1}{27}$$
- $(-8)^2$.
  $-8^2 = (-8)(-8) = 64$.
- 6^0.
  Since $a^0 = 1$ for any nonzero a, $6^0 = 1$.

4. **(3 points)** *Simplify the expression* $x^2(x^{-1}y^2)^3$.

Applying the known exponent-simplification rules:

$$\begin{aligned} x^2(x^{-1}y^2)^3 &= x^2(x^{-1\cdot 3}y^{2\cdot 3}) \\ &= x^2x^{-3}y^6 \\ &= x^{-1}y^6 = \frac{y^6}{x} \end{aligned}$$

5. **(3 points)** *Write the polynomial expression* $(3x-4)(2x+1)$ *in standard form.*

Adding together the results of all four multiplications:

$$(3x-4)(2x+1) = (3x)(2x)+(3x)(1)-4(2x)-4(1) = 6x^2+3x-8x-4 = 6x^2-5x-4$$