Name: _____

Directions: Show all work. No credit for answers without work.

1. [**5 points**] Rebecca receives a new tablet computer with 32 gigabytes of memory. The amount of unused memory M (in gigabytes) is a function of the time t (in months) that she has owned the device.

   (a) Translate the following into English: $M(16) = 20$. Be sure to include units.

   (b) Translate the following into a mathematical equation: initially, the device comes loaded with 3 gigabytes worth of software and has only 29 gigabytes of unused space.

2. [**5 points**] A linear function passes through the points $(2, 5)$ and $(-1, -3)$.

   (a) Find the equation of this linear function; express your answer in the form $y = mx + b$.

   (b) Find the vertical intercept (or y-intercept).

   (c) Find the horizontal intercept (or x-intercept).