Quiz 24   Name:_____

You must show your work to get full credit.

1. State the **division algorithm**.

2. Define a is a **divisor** of b.

3. Define a is a **multiple** of b.

4. Use that $5 \times 8 \equiv 1 \,(\mathrm{mod}\,13)$ to prove:

   (a) If $8x \equiv 0 \,(\mathrm{mod}\,13)$, then $x \equiv 0 \,(\mathrm{mod}\,13)$.

   (b) If $8x \equiv 2 \,(\mathrm{mod}\,13)$, then $x \equiv 10 \,(\mathrm{mod}\,13)$.