A geometric sequence has second term 36 and fourth term 16.
Find the first term.

$$\_ , 36 , \_ , 16 , \ldots$$

$$36 \times r^2 = 16$$

$$r^2 = \frac{16}{36}$$

$$r^2 = \frac{4}{9}$$

$$r = \pm\sqrt{\frac{4}{9}}$$

$$r = \pm\frac{2}{3}$$

$$U_2 = U_1 \times r$$

$$U_1 = U_2 \div r$$

$$U_1 = 36 \div \left(\frac{2}{3}\right)$$

$$U_1 = 36 \times \left(\frac{3}{2}\right)$$

$$U_1 = 54$$

$$U_1 = 36 \div \left(-\frac{2}{3}\right)$$

$$U_1 = -54$$