Complete the calculations below so that they follow Euler's Phi Function. State your answer as integers betweeen 0 and 99.

$$\varphi(360) = \left(2^{\boxed{3}} - \boxed{2}^{\boxed{2}}\right)\left(\boxed{3}^{2} - \boxed{3}^{\boxed{1}}\right)\left(\boxed{5}^{\boxed{1}} - \boxed{5}^{\boxed{0}}\right) = 96$$

Complete the calculations below so that they follow Euler's Phi Function. State your answer as integers betweeen 0 and 99.

$$\varphi(504) = \left(2^{\boxed{3}} - \boxed{2}^{\boxed{2}}\right)\left(\boxed{3}^{2} - \boxed{3}^{\boxed{1}}\right)\left(\boxed{7}^{\boxed{1}} - \boxed{7}^{\boxed{0}}\right) = 144$$

Fill in the missing value in the expression below so that it expresses Euler's theorem. State your answer as an integer between 0 and 99.

$13^{\square} \equiv 1 \pmod{85}$

64

Euler's Theorem can be used to calculate exponents in an efficient way. Complete the calculations below with reference to Euler's Theorem. State your answer as integers between 0 and 999.

$$3^{308} \bmod 103 \equiv 3^{3\cdot\boxed{102}+\boxed{2}} \equiv 9$$

Fill in the missing value in the expression below so that it expresses Euler's theorem. State your answer as an integer between 0 and 99.

$$17^{\boxed{60}} \equiv 1 \mod 61$$

Euler's Theorem can be used to calculate exponents in an efficient way. Complete the calculations below with reference to Euler's Theorem. State your answer as integers between 0 and 999.

$$3^{309} \bmod 103 \equiv 3^{3\cdot\boxed{102}+\boxed{3}} \equiv 27$$

Fill in the missing value in the expression below such that it expresses Euler's theorem. State your answer as an integer between 0 and 99.

$$17^{\boxed{30}} \equiv 1 \mod 62$$

✔