The mod function is defined as the amount by which a number exceeds the largest integer multiple of the divisor that is not greater than that number. In this case, -340 lies between -360 and -300, so -360 is the greatest multiple LESS than -340; we subtract 60 * -6 = -360 from -340 and get 20:

\[
-420 \quad -360 \quad -300 \quad -240 \quad -180 \quad -120 \quad -60 \quad 0 \quad 60 \quad 120 \quad 180 \quad 240 \quad 300 \quad 360
\]

\[\begin{array}{ccccccccc}
-360 & -340 & 300 & |340 \\
| & | & | & |
\end{array}\]

\[20\]

Working with a positive number like 340, the multiple we subtract is smaller in absolute value, giving us 40; but with negative numbers, we subtract a number with a LARGER absolute value, so that the mod function returns a positive value. This is not always what people expect, but it is consistent.