This expression is equivalent to $(3 - 5i)(-2i)$.

$(3 - 5i)(-2i) = (3)(-2i) - (5i)(-2i) = -6i - \left(-10i^2\right) = -6i + 10i^2$

$= -6i + 10(-1) = -6i - 10$

The correct answer is $10 + 6i$.