

To find the composite expression $f(3x)$, we must apply the foundational rules of **functional notation**. When an operation instructs you to evaluate a function for a given input value or expression, that new input completely replaces every single instance of the original independent variable x within the formula. You can think of the original function as a blank structural mold:
 $f(\) = (\)^2 + 5(\)$.

Plugging the expression $3x$ into every available slot in our function structure gives:

$$f(3x) = (3x)^2 + 5(3x)$$

Now, we simplify each term step-by-step using basic algebraic laws:

1. **First Term:** According to the **Power of a Product Rule**, the exponent outside the parentheses must apply to both the coefficient and the variable inside. Therefore,
 $(3x)^2 = 9x^2$
2. **Second Term:** Multiplying the numerical constant by the inner term yields $5(3x) = 15x$

Combining these two simplified parts gives us our final result: $9x^2 + 15x$.