11. \( T(-2, -5) \) lies on the circumference of the circle with equation
\[(x + 8)^2 + (y + 2)^2 = 45. \]

(a) Find the equation of the tangent to the circle passing through \( T \).

(b) This tangent is also a tangent to a parabola with equation \( y = -2x^2 + px + 1 - p \), where \( p > 3 \).
Determine the value of \( p \).

Answers

(a) \( y = 2x - 1 \) \hspace{1cm} (b) \( p = 10 \)