

Name_____ **No Calculators. Present neatly. Score**_____.

1. Use the limit definition to find the derivative of $f(x)$.

$$f(x) = \frac{4-x}{3+x}$$

2. At what point(s) is the tangent line to the curve $y^3 = 2x^2$ perpendicular to the line $x + 2y - 2 = 0$?

Your work:

Name_____ **No Calculators. Present neatly. Score**_____.

1. Use the limit definition to find the derivative of $f(x)$.

$$f(x) = \frac{3-x}{4+x}$$

2. Find the values of a and b for the curve $x^2y + ay^2 = b$ if the point $(1, 1)$ is on the graph and the tangent line at $(1, 1)$ has the equation $4x + 3y = 7$.

Your work: