

AP[®] Calculus BC (Operational) 2004 Sample Student Responses

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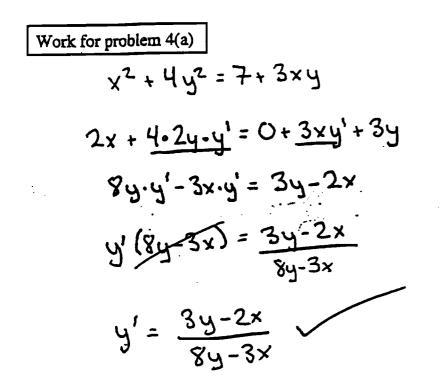
CALCULUS BC

SECTION II, Part B

Time—45 minutes

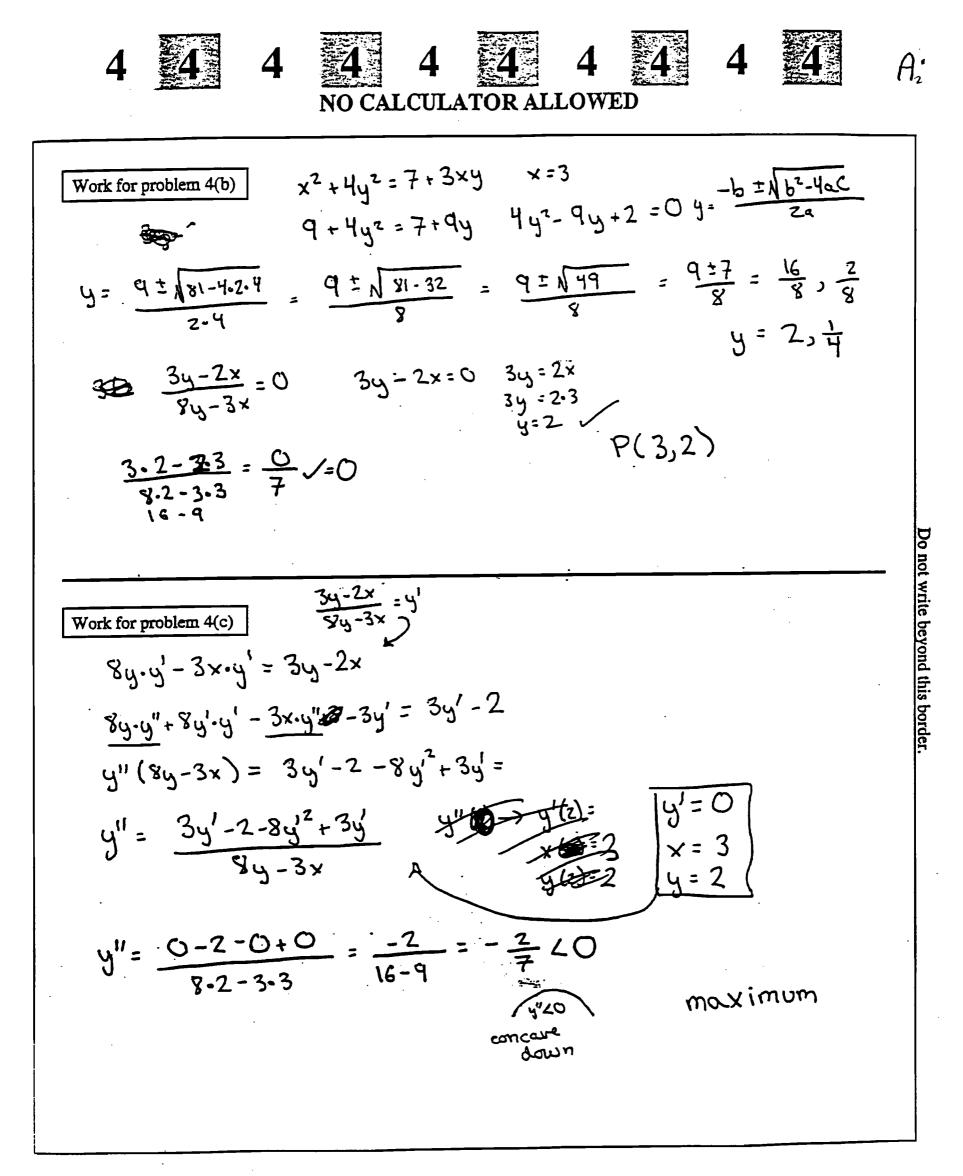
Number of problems—3

No calculator is allowed for these problems.



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CALCULUS AB SECTION II, Part B Time—45 minutes

4

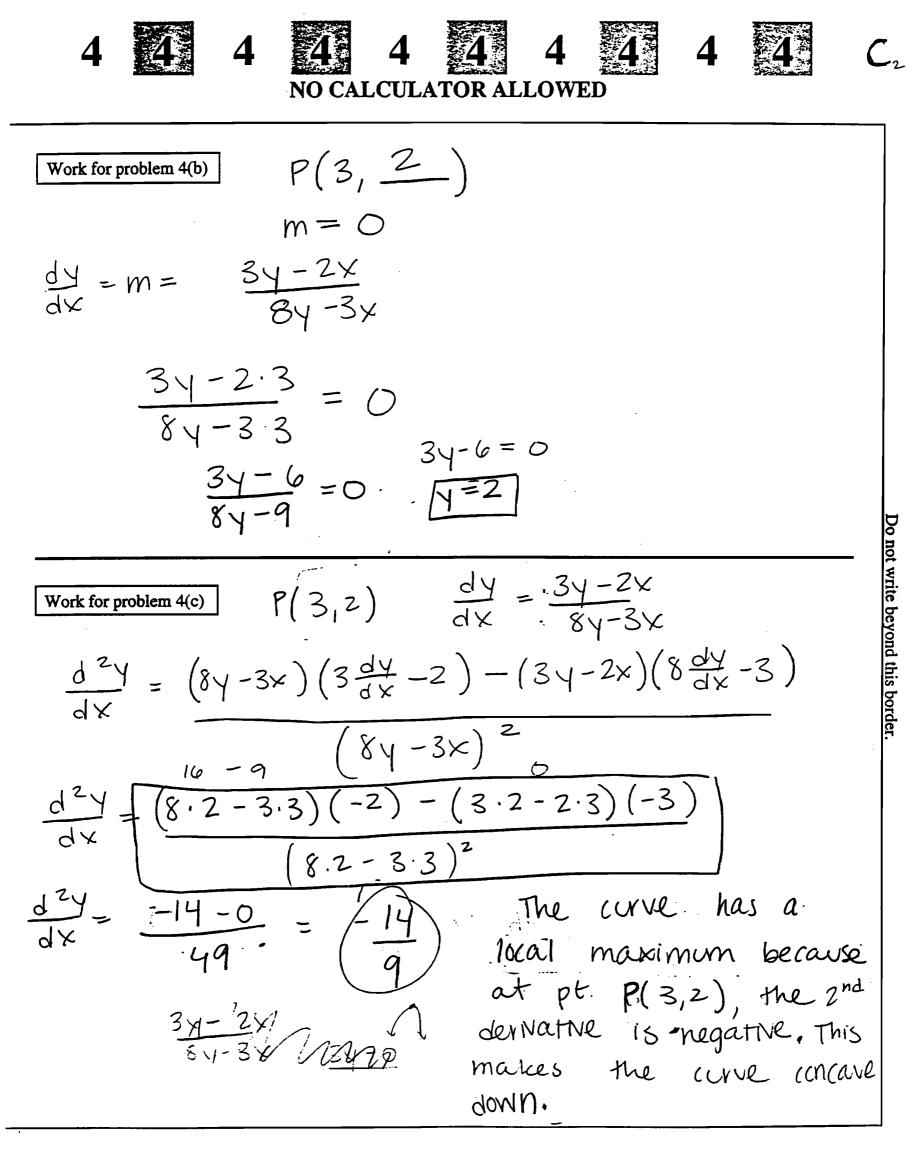
Number of problems—3

No calculator is allowed for these problems.

Work for problem 4(a)
$$X^{2} + 4Y^{2} = 7 + 3xY$$

 $\frac{dy}{dx} = \frac{3y - 2x}{8y - 3x}$ Show
 $2X \cdot \frac{dx}{dx} + 8Y \frac{dy}{dx} = 0 + 3(x \cdot \frac{dy}{dx} + Y)$
 $2x + 8Y \frac{dY}{dx} = 3x \frac{dy}{dx} + 3Y$
 $8Y \frac{dY}{dx} - 3x \frac{dY}{dx} = 3Y - 2x$
 $\frac{dY}{dx}(8Y - 3x) = 3Y - 2x$
 $\frac{dY}{dx}(8Y - 3x) = 3Y - 2x$

Continue problem 4 on page 11.



GO ON TO THE NEXT PAGE.