Evaluate $\lim_{(x,y)\to(2,4)} \sqrt[3]{\frac{8xy}{2x+y}}$

(a) 2 (b) 3 (c) -2 (d) -3

- a. a ✔
- b. b
- c. c
- d. d

Find $\frac{\partial f}{\partial y}$ if $f(x, y) = 2x^2y^3 - 3xy^2 + 2x^2 + 3y^2 + 1$

(a) $6x^2y^3 - 3xy^2 + 4x^2 + 3y^2$

(b) $4xy^3 - 3y^2 + 4x + 3y^2$

(c) $6x^2y^2 - 6xy + 6y$

(d) 0

- a. a
- b. b
- c. c ✔
- d. d

Find f_y if $f(x, y) = x \cos xy^2$

(a) $-2x^2y \sin xy^2$ (b) $2x^2 \sin xy^2$ (c) $2x^2y \sin xy^2$ (d) 0

- a. a ✔
- b. b
- c. c
- d. d

The domain of the vector - valued function given below :

$\vec{r}(t) = \frac{1}{e^t} i + \sqrt{-t} j + \frac{5}{t} k$

- a. $(-\infty, 0)$ ✔
- b. $(0, \infty)$
- c. $(-\infty, 3]$
- d. $(-\infty, \infty)$
- e. $[3, \infty)$

The parametric equations for the tangent line to the curve of $\vec{r}(t) = \langle t, t^2, t^3 \rangle$ at the point (4,16,64)

- a. x=-4+t , y=-16+8t , z= -64+48t
- b. x=4-t , y=16-8t , z= 64+48t
- c. x=1+t , y=1+8t , z= 1+48t
- d. x=4+t , y=16+8t , z= 64+48t ✔
- e. x=4+t , y=16+8t , z= 64-24t

The correct answer is:
x=4+t , y=16+8t , z= 64+48t

The arc length of the curve $\vec{r}(t) =$‹ $8cost, \sqrt{17}t, 8sint$ › for $0 \leq t \leq 1 is$

- a. 3
- b. 6
- c. 12
- d. 15
- e. 9 ✔

The correct answer is:
9