

Quiz 8 (Problems)

1. Describe the domain of $f(x, y) = \frac{\ln(x-y)}{\sqrt{xy}}$
2. Find an equation of the level surface of $f(x, y, z) = xy \sin z + 3xy^2 e^z$ at $P(1, 2, 0)$
3. Determine if the following limit exists; if it does also state the value of the limit:
 $\lim_{(x,y) \rightarrow (2,1)} \frac{x^2 - xy - 2y^2}{x^2 - 4y^2}$

Quiz 8 (Answers)

1. (Math-252 Quiz 8)

$$\{(x, y) : x > y, xy > 0\}$$

2. (Math-252 Quiz 8)

$$xy \sin z + 3xy^2 e^z$$

3. (Math-252 Quiz 8)

$$L = \frac{3}{4}$$