

Each of the following formulas corresponds to a level set and to a figure on this sheet.

Match the numbered formulas to the lettered level sets and figures.

1  $z = \cos\sqrt{x^2+y^2}$ ,  $|x| \leq 10$ ,  $|y| \leq 10$

2  $z = r^2 e^{-r^2} \cos^2(\frac{3}{2}\theta)$ ,  $|x| \leq 3$ ,  $|y| \leq 3$

3  $z = \frac{1}{1+x^2+y^2}$ ,  $|x| \leq 2$ ,  $|y| \leq 2$

4  $z = 3(x^2+3y^2)e^{-x^2-y^2}$ ,  $|x| \leq 2.5$ ,  $|y| \leq 2.5$

5  $z = xye^{-\frac{1}{2}(x^2+y^2)}$ ,  $|x| \leq 3.5$ ,  $|y| \leq 3.5$

6  $z = xe^{-x^2-y^2}$ ,  $|x| \leq 2$ ,  $|y| \leq 2$

