14.2

9. $\lim_{(x,y)\to(0,0)} \frac{x^4-4y^2}{x^2+2y^2}$ $\quad \frac{0+4t^2}{2t^2} = -2 \qquad \frac{t^4-0}{t^2+0} = \infty$ DNE

10. $\lim_{(x,y)\to(0,t)} \frac{5y^4\cos^2 x}{x^4+y^4} = \frac{5t^4}{t^4} = 5 \qquad \lim_{(x,y)\to(1,0)} \frac{5y^4\cos^2 x}{x^4+y^4} = \frac{0}{t^4} = 0$ DNE

23. Approaches different numbers along different lines

24. Approaches different numbers along different lines

40. $\lim_{(x,y)\to(0,0)} (x^2+y^2)\ln(x^2+y^2) = \lim_{r\to 0} r^2 \ln(r^2) = 0$

41. $\lim_{(x,y)\to(0,0)} \frac{e^{-x^2-y^2}-1}{x^2+y^2} = \lim_{r\to 0} \frac{e^{-r^2}-1}{r^2} = -1$