

## KEY TERMS AND CONCEPTS 11.6, 12.1 + 12.2

- Movement in polar and cylinder coordinates
  - Formulas  $\frac{d}{dt} \mathbf{u}_r = \mathbf{u}_\theta \frac{d}{dt} \theta$ ,  $\frac{d}{dt} \mathbf{u}_\theta = -\mathbf{u}_r \frac{d}{dt} \theta$ .
- Definition of multivariable functions, domain (definisjonsmengde) og range (verdimengde).
- Definition of bounded (begrensede) and unbounded (ubegrensede) sets (mengder), boundary points (randpunkt) and interior points (indre punkt), open and closed sets.
- Level curves (nivåkurver) and level surfaces (nivåflater) of a multivariable function.
- Definition of limits.
  - The function  $f$  has the limit  $L$  in the interior point  $(x_0, y_0)$  if there for any  $\varepsilon > 0$  exists a  $\delta > 0$  such that  $0 < \sqrt{(x - x_0)^2 + (y - y_0)^2} < \delta$  implies that  $|f(x, y) - L| < \varepsilon$ .
- Limits in polar coordinates.
- Properties of limits.
  - Sums and differences.
  - Products, fractions and multiplication by constants.
  - Powers.
- Be able to show that limits does not exist.
- Definition of continuity.
- Composition (sammensetting) of continuous functions.
- Extremal values.