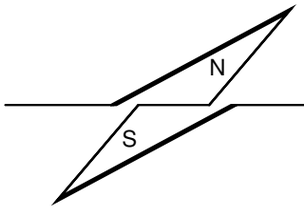

MATEMATIK F2

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Tekst til opgave 3 og 9 i afsnit 20.3 i 7. ed. (19.3 i 8. ed.):

Benyt formlerne i opgave 19.3.10 (8. ed.) til at udregne:

Opgave 3:

$$y'' = -y,\ y(0) = 0,\ y'(0) = 1,\ h = 0.1 \text{ (5 steps)}$$

Opgave 9:

$$y'' = xy' - 4y,\ y(0) = 3,\ y'(0) = 0,\ h = 0.1 \text{ (5 steps)}$$

Verify that the exact solution is $y = x^4 - 6x^2 + 3$. Compute the error of y_n.