



## 基本問題を確認しよう

数Ⅱ

平均変化率と微分係数(解答)

① 平均変化率は  $\frac{f(3) - f(1)}{3 - 1} = \frac{(3^2 - 2 \cdot 3) - (1^2 - 2 \cdot 1)}{2} = \frac{4}{2} = 2$

② (1)  $\lim_{x \rightarrow 3} (x^2 - 3x + 1) = 3^2 - 3 \cdot 3 + 1 = 1$

(2)  $\lim_{x \rightarrow 1} \frac{x^2 - 1}{x - 1} = \lim_{x \rightarrow 1} \frac{(x - 1)(x + 1)}{x - 1} = \lim_{x \rightarrow 1} (x + 1) = 1 + 1 = 2$

③  $f'(1) = \lim_{h \rightarrow 0} \frac{f(1+h) - f(1)}{h} = \lim_{h \rightarrow 0} \frac{2(1+h)^2 - 2 \cdot 1^2}{h} = \lim_{h \rightarrow 0} \frac{4h + 2h^2}{h} = \lim_{h \rightarrow 0} (4 + 2h) = 4$