

次の式を計算せよ。

$$(1) \frac{x^2 - 2x - 3}{x^2 - x - 2}$$

$$(4) \frac{a^2 - (b - c)^2}{(a + b)^2 - c^2}$$

$$(2) \frac{x^2 + 3x + 2}{x^2 - 4} \times \frac{x - 2}{x + 1}$$

$$(5) \frac{x^2 + xy + y^2}{x^2 - xy + y^2} \div \frac{x^3 - y^3}{x^3 + y^3}$$

$$(3) \frac{x^2 - 11x + 24}{x^2 - 6x - 16} \times \frac{x^2 + 2x}{x^2 - 6x + 9}$$

$$(6) \frac{2x^2 - 7x + 3}{x^2 + x - 2} \div \frac{x^2 - 2x - 3}{x^2 - 4} \times \frac{2x^2 + x - 3}{2x^2 - 5x + 2}$$