

1. 次の計算をなさい。

$$(1) \frac{\sqrt{8} + \sqrt{44}}{\sqrt{32}} - \frac{\sqrt{11} - \sqrt{18}}{\sqrt{8}} - \sqrt{(-2)^2}$$

(20 青雲)

$$(2) \star \frac{6\sqrt{2} - 4}{\sqrt{12}} - \frac{2\sqrt{54} - 4\sqrt{2}}{\sqrt{24}} + (\sqrt{6} - 3)^2$$

(20 京都女子)

$$(3) 3\sqrt{48} - \frac{6\sqrt{(-2)^2}}{\sqrt{3}} + \frac{(\sqrt{2} - 2\sqrt{3})^2}{\sqrt{2}}$$

(20 弘学館)

$$(4) \star (\sqrt{21} - \sqrt{15})(\sqrt{7} + \sqrt{5})$$
$$\times \left(\frac{1}{\sqrt{15}} + \frac{1}{3} \right) \left(\frac{1}{\sqrt{3}} - \frac{1}{\sqrt{5}} \right)$$

(20 東京農業大一)

$$(5) \frac{\sqrt{7} + \sqrt{5}}{\sqrt{7} - \sqrt{5}} + \frac{\sqrt{28}}{\sqrt{7} + \sqrt{5}}$$

(20 城西大付川越)

$$(6) \star \left(\frac{\sqrt{6} + \sqrt{3} - 3}{3} \right) \left(\frac{\sqrt{6} - \sqrt{3} + 3}{3} \right)$$

(20 本郷)

$$(7) (1 + \sqrt{2} + \sqrt{3})(\sqrt{3} + \sqrt{6} - 3)$$

(20 帝京大高)

$$(8) \star \frac{(\sqrt{12} + \sqrt{2})^2}{(3\sqrt{2} - 2\sqrt{3})(\sqrt{18} + \sqrt{12})}$$
$$- \frac{\sqrt{2}(\sqrt{3} - \sqrt{2})^2 - \sqrt{18}}{\sqrt{3}}$$

(20 中央大付)