

## <第 29 回 解答と解説>

- 1 (1)  $2\sqrt{6} - 2$  (2)  $2\sqrt{10} - 1$   
(3)  $9 + 4\sqrt{2}$  (4)  $22 - 4\sqrt{10}$   
(5) 11 (6) 6

**解説**

$$\begin{aligned} (1) \text{与式} &= (\sqrt{6})^2 + (4-2)\sqrt{6} - 4 \times 2 = 6 + 2\sqrt{6} - 8 \\ &= 2\sqrt{6} - 2 \end{aligned}$$

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

3 (1) 8 (2)  $3 + 2\sqrt{14}$

4 (1)  $8\sqrt{6}$  (2) 24 (3) 7

**解説**

$$\begin{aligned} (1) x^2 - y^2 &= (x-y)(x+y) \\ &= (\sqrt{6} + 2 - \sqrt{6} + 2)(\sqrt{6} + 2 + \sqrt{6} - 2) \\ &= 4 \times 2\sqrt{6} = 8\sqrt{6} \end{aligned}$$

5 (1) 3, 12, 15 (2) 4

**解説**

$$\begin{aligned} (1) \sqrt{27(15-n)} &= 3\sqrt{3(15-n)} \text{ より,} \\ 15-n &= 0, 3, 3 \times 2^2 \\ n &= 15, 15-3, 15-12 \end{aligned}$$