

P 6 1 2章の基本のたしかめ

1. 「平方根は？」 「二つある」

$$(1) \pm 10 \quad (2) \pm 0.2 \quad (3) \pm \frac{5}{7}$$

2.

$$(1) \sqrt{36} = 6 \quad (2) -\sqrt{0.64} = -0.8 \quad (3) \sqrt{\frac{16}{81}} = \frac{4}{9}$$

3. 「中身で勝負！」

$$(1) \begin{array}{c} \sqrt{9} \\ \downarrow \\ 3 \end{array} > \sqrt{7} \quad (2) -\sqrt{5} > -\sqrt{6}$$

4.

$$(1) \sqrt{5} \times \sqrt{3} = \sqrt{15} \quad (2) \sqrt{2} \times (-\sqrt{7}) = -\sqrt{14}$$

$$(3) \sqrt{6} \div \sqrt{2} = \sqrt{3} \quad (4) (-\sqrt{10}) \div \sqrt{5} = -\sqrt{2}$$

5.

$$(1) \sqrt{75} = \sqrt{25} \times \sqrt{3} = 5\sqrt{3} \quad (2) \sqrt{\frac{7}{9}} = \frac{\sqrt{7}}{\sqrt{9}} = \frac{\sqrt{7}}{3}$$

6. 「せめて分母だけでもルートをなくしたい！」

$$(1) \frac{1}{\sqrt{5}} = \frac{1 \times \sqrt{5}}{\sqrt{5} \times \sqrt{5}} = \frac{\sqrt{5}}{\sqrt{25}} = \frac{\sqrt{5}}{5} \quad (2) \frac{5}{2\sqrt{3}} = \frac{5 \times \sqrt{3}}{2\sqrt{3} \times \sqrt{3}} = \frac{5\sqrt{3}}{2\sqrt{9}} = \frac{5\sqrt{3}}{6}$$

7.

$$(1) 2\sqrt{3} + \sqrt{3} = 3\sqrt{3} \quad (2) 3\sqrt{5} + \sqrt{2} - \sqrt{5} = 2\sqrt{5} + \sqrt{2}$$

$$(3) \sqrt{45} + \sqrt{5} = 3\sqrt{5} + \sqrt{5} = 4\sqrt{5} \quad (4) \sqrt{50} - \sqrt{32} = 5\sqrt{2} - 4\sqrt{2} = \sqrt{2}$$

8.

$$(1) \sqrt{5}(2 + \sqrt{5}) = 2\sqrt{5} + \sqrt{25} = 2\sqrt{5} + 5$$

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

$$(3) (\sqrt{7} + 3)(\sqrt{7} - 3) = \sqrt{49} - 9 = 7 - 9 = -2$$

$$(4) (\sqrt{5} - 2)^2 = (\sqrt{5})^2 - 2 \times \sqrt{5} \times 2 + 2^2 = \sqrt{25} - 4\sqrt{5} + 4 = 5 - 4\sqrt{5} + 4 \\ = 9 - 4\sqrt{5}$$