

**Zadanie 5.**

Oblicz wyrażenia:

$$(3\sqrt{2})^2 =$$

$$(3\sqrt{5})^2 =$$

$$2\sqrt{3} \cdot 3\sqrt{3} =$$

$$2\sqrt{3} \cdot 3\sqrt{5} =$$

$$\frac{\sqrt{3}}{\sqrt{27}} =$$

$$\sqrt{3}(2 - 2\sqrt{3}) =$$

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

$$3\sqrt{2}(3 - 2\sqrt{2}) =$$

$$2\sqrt{6}(4 - \sqrt{6}) =$$

$$- 2\sqrt{7}(3\sqrt{7} + 5) =$$

**Zadanie 5. (rozwiązania)**

Oblicz wyrażenia:

$$(3\sqrt{2})^2 = (3^2)(\sqrt{2})^2 = 9 \cdot 2 = 18$$

$$(3\sqrt{5})^2 = (3^2)(\sqrt{5})^2 = 9 \cdot 5 = 45$$

$$2\sqrt{3} \cdot 3\sqrt{3} = (2 \cdot 3)(\sqrt{3} \cdot \sqrt{3}) = 6 \cdot 3 = 18$$

$$2\sqrt{3} \cdot 3\sqrt{5} = (2 \cdot 3)(\sqrt{3} \cdot \sqrt{5}) = 6\sqrt{15}$$

$$\frac{\sqrt{3}}{\sqrt{27}} = \sqrt{\frac{3}{27}} = \sqrt{\frac{1}{9}} = \frac{1}{\sqrt{9}} = \frac{1}{3}$$

$$\sqrt{3}(2 - 2\sqrt{3}) = 2\sqrt{3} - 2\sqrt{3}\sqrt{3} = 2\sqrt{3} - 2 \cdot 3 = 2\sqrt{3} - 6$$

$$3\sqrt{5}(\sqrt{5} + 2) = 3\sqrt{5}\sqrt{5} + 3\sqrt{5} \cdot 2 = 3 \cdot 5 + 6\sqrt{5} = 15 + 6\sqrt{5}$$

$$3\sqrt{2}(3 - 2\sqrt{2}) = 3\sqrt{2} \cdot 3 - 3\sqrt{2} \cdot 2\sqrt{2} = 9\sqrt{2} - 6\sqrt{2}\sqrt{2} = 9\sqrt{2} - 12$$

$$2\sqrt{6}(4 - \sqrt{6}) = 2\sqrt{6} \cdot 4 - 2\sqrt{6}\sqrt{6} = 8\sqrt{6} - 2 \cdot 6 = 8\sqrt{6} - 12$$

$$-2\sqrt{7}(3\sqrt{7} + 5) = -2\sqrt{7} \cdot 3\sqrt{7} - 2\sqrt{7} \cdot 5 = -6\sqrt{7}\sqrt{7} - 10\sqrt{7} = -6 \cdot 7 - 10\sqrt{7} = -42 - 10\sqrt{7}$$

## Kartkówka – Grupa 1

- Oblicz:  $(3\sqrt{2})^2$
- Oblicz:  $2\sqrt{3} \cdot 3\sqrt{5}$
- Oblicz:  $\frac{\sqrt{3}}{\sqrt{27}}$
- Oblicz:  $3\sqrt{2}(3 - 2\sqrt{2})$
- Oblicz:  $-2\sqrt{7}(3\sqrt{7} + 5)$

## Kartkówka – Grupa 2

- Oblicz:  $(3\sqrt{5})^2$
- Oblicz:  $2\sqrt{3} \cdot 3\sqrt{3}$
- Oblicz:  $\sqrt{3}(2 - 2\sqrt{3})$
- Oblicz:  $2\sqrt{6}(4 - \sqrt{6})$
- Oblicz:  $3\sqrt{5}(\sqrt{5} + 2)$

## Kartkówka – Grupa 3

- Oblicz:  $(3\sqrt{2})^2$
- Oblicz:  $\sqrt{3}(2 - 2\sqrt{3})$
- Oblicz:  $2\sqrt{6}(4 - \sqrt{6})$
- Oblicz:  $3\sqrt{2}(3 - 2\sqrt{2})$
- Oblicz:  $-2\sqrt{7}(3\sqrt{7} + 5)$