

Lembar Kerja Peserta Didik

# LKPD

MATEMATIKA

**BILANGAN BENTUK AKAR**

**Nama:**

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**Kelas :**

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## Kegiatan 1

Lengkapilah titik-titik berikut!

### sifat 1

$$1. 2\sqrt{2} + 3\sqrt{2} = (\dots + \dots)\sqrt{\dots} = \dots\sqrt{\dots}$$

$$2. 5\sqrt{3} - 2\sqrt{3} = (\dots - \dots)\sqrt{\dots} = \dots\sqrt{\dots}$$

Berdasarkan soal diatas dapat disimpulkan bahwa:

$$a\sqrt{c} \pm b\sqrt{c} = (\dots \pm \dots)\sqrt{\dots}$$

### sifat 2

$$1. \sqrt{4} \times \sqrt{25} = \dots \times \dots = \dots$$

$$\sqrt{4} \times \sqrt{25} = \sqrt{\dots \times \dots} = \sqrt{\dots} = \dots$$

$$2. \sqrt{20} = \sqrt{\dots \times \dots} = \sqrt{\dots} \times \sqrt{\dots} = \dots\sqrt{\dots}$$

Berdasarkan soal diatas dapat disimpulkan bahwa:

$$\sqrt{ab} = \sqrt{\dots \times \dots} = \sqrt{\dots} \times \sqrt{\dots}$$

### sifat 3

$$1. \frac{\sqrt{81}}{\sqrt{9}} = \frac{\dots}{\dots} = \dots$$

$$2. \sqrt{\frac{81}{9}} = \sqrt{\dots} = \dots$$

Berdasarkan soal diatas dapat disimpulkan bahwa:

$$\sqrt{\frac{a}{b}} = \frac{\sqrt{\dots}}{\sqrt{\dots}}, \text{ dengan } a \geq 0 \text{ dan } b > 0$$

### sifat 4

$$1. (\sqrt[3]{27})^3 = (\dots)^3 = \dots$$

$$2. (\sqrt[5]{32})^5 = (\dots)^5 = \dots$$

Berdasarkan soal diatas dapat disimpulkan bahwa:

$$(\sqrt[n]{a})^n = \dots$$



## Kegiatan 2



Lengkapilah titik-titik berikut!

1.  $\sqrt{12} = \sqrt{4 \times \dots} = \sqrt{4} \times \sqrt{\dots} = \dots \sqrt{\dots}$

2.  $\sqrt{72} = \sqrt{\dots \times 2} = \sqrt{\dots} \times \sqrt{2} = \dots \sqrt{2}$

3.  $\sqrt{80} = \sqrt{\dots \times 5} = \sqrt{\dots} \times \sqrt{5} = \dots \sqrt{5}$

4.  $2\sqrt{48} = 2 \times \sqrt{\dots \times 3} = 2 \times \sqrt{\dots} \times \sqrt{3} = 2 \times \dots \sqrt{3}$

5.  $5\sqrt{3} + 10\sqrt{3} = (\dots + \dots)\sqrt{\dots} = \dots \sqrt{\dots}$

6.  $7\sqrt{5} - 3\sqrt{5} = (\dots - \dots)\sqrt{\dots} = \dots \sqrt{\dots}$

7.  $5\sqrt{12} + 2\sqrt{27} = 5\sqrt{\dots \times \dots} + 2\sqrt{\dots \times \dots}$   
 $= 5 \times \dots \sqrt{\dots} + 2 \times \dots \sqrt{\dots}$   
 $= \dots \sqrt{\dots} + \dots \sqrt{\dots}$   
 $= (\dots + \dots)\sqrt{\dots}$   
 $= \dots \sqrt{\dots}$



$$\begin{aligned}
 8. \quad 7\sqrt{20} - 2\sqrt{45} + \sqrt{5} &= 7\sqrt{\dots \times \dots} - 2\sqrt{\dots \times \dots} + \sqrt{5} \\
 &= 7 \times \dots \sqrt{\dots} - 2 \times \dots \sqrt{\dots} + \sqrt{5} \\
 &= \dots \sqrt{\dots} - \dots \sqrt{\dots} + \sqrt{5} \\
 &= (\dots - \dots + \dots) \sqrt{\dots} \\
 &= \dots \sqrt{\dots}
 \end{aligned}$$

$$\begin{aligned}
 9. \quad \sqrt{3} \times \sqrt{6} &= \sqrt{\dots \times \dots} \\
 &= \sqrt{\dots} \\
 &= \sqrt{\dots \times \dots} \\
 &= \dots \sqrt{\dots}
 \end{aligned}$$

$$\begin{aligned}
 10. \quad 2\sqrt{2} \times 5\sqrt{14} &= 10\sqrt{28} \\
 &= 10\sqrt{4 \times \dots} \\
 &= 10 \times \dots \sqrt{\dots} \\
 &= \dots \sqrt{\dots}
 \end{aligned}$$





## Kegiatan 3



### Kesimpulan

Untuk menyederhanakan bentuk akar, digunakan bentuk akar sebagai berikut:

1.  $a\sqrt{c} \pm b\sqrt{c} = (\dots \pm \dots)\sqrt{\dots}$
2.  $\sqrt{ab} = \sqrt{\dots \times \dots} = \sqrt{\dots} \times \sqrt{\dots}$
3.  $\sqrt{a} \times \sqrt{b} = \sqrt{\dots \times \dots} = \sqrt{ab}$
4.  $\sqrt{\frac{a}{b}} = \frac{\sqrt{\dots}}{\sqrt{\dots}}$ , dengan  $a \geq 0$  dan  $b > 0$
5.  $(\sqrt[n]{a})^n = \dots$