

# BENTUK AKAR, PANGKAT, DAN LOGARITMA<sup>1</sup>

Jika  $a$  dan  $b$  bilangan rasional positif dan  $a \geq b$ , maka:

$$1. \sqrt{a+b+2\sqrt{ab}} = \sqrt{a} + \sqrt{b}$$

$$2. \sqrt{a+b-2\sqrt{ab}} = \sqrt{a} - \sqrt{b}$$

**Cek:**

Misalkan  $\sqrt{a+b+2\sqrt{ab}} = x$ , maka:

$$\sqrt{a+b+2\sqrt{ab}} = x$$

$$a+b+2\sqrt{ab} = x^2$$

$$(\sqrt{a} + \sqrt{b})(\sqrt{a} + \sqrt{b}) = x^2$$

$$(\sqrt{a} + \sqrt{b})^2 = x^2$$

$$\sqrt{a} + \sqrt{b} = x$$

$$\sqrt{a+b+2\sqrt{ab}} = \sqrt{a} + \sqrt{b}$$

Dan misalkan  $\sqrt{a+b-2\sqrt{ab}} = y$ , maka:

$$\sqrt{a+b-2\sqrt{ab}} = y$$

$$a+b-2\sqrt{ab} = y^2$$

$$(\sqrt{a} - \sqrt{b})(\sqrt{a} - \sqrt{b}) = y^2$$

$$(\sqrt{a} - \sqrt{b})^2 = y^2$$

$$\sqrt{a} - \sqrt{b} = y$$

$$\sqrt{a+b-2\sqrt{ab}} = \sqrt{a} - \sqrt{b}$$