

② 1. a.)  $6x^{18} \frac{1}{2}$  b.)  $\frac{2}{x^8} \frac{1}{2}$  c.)  $0,1xy^2 \frac{1}{2}$  d.)  $4a^3 \frac{1}{2}$

① 2.  $y^2 = 1,44x^6 \cdot 1,2x^3 = \underline{\underline{1,728x^9}}$

① 3.  $\sqrt{3} \text{ l}$

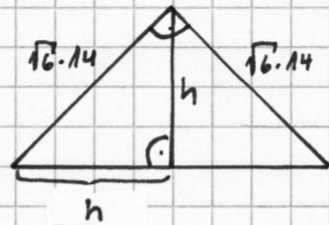
4.  $a^2 = 72$ ,  $b^2 = 24$ ,  $c^2 = 48$

①  $\Rightarrow 72 = 24 + 48 \Rightarrow \underline{\underline{\text{Ja, rechtwinklig. l}}}$

5.  $(\sqrt{6} \cdot 14)^2 = 2h^2 \quad | :2$

$\frac{6 \cdot 196}{2} = h^2 \quad | \sqrt{\quad}$

$h = \sqrt{588} \approx \underline{\underline{24,2 \text{ cm l}}}$



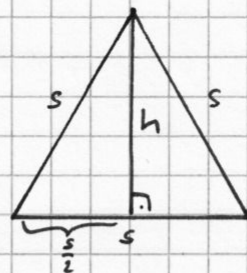
6.  $d = \sqrt{a^2 + b^2} = \sqrt{(\sqrt{6} \cdot 2)^2 + (\sqrt{5} \cdot 2)^2}$

①  $= \sqrt{24 + 20} = \sqrt{44} = \underline{\underline{2 \cdot \sqrt{11} \text{ cm l}}}$

7.  $s^2 = h^2 + \frac{s^2}{4} \quad | - \frac{s^2}{4}$

$\frac{3s^2}{4} = h^2 \quad | \sqrt{\quad}$

②  $h = \sqrt{\frac{3s^2}{4}} = \frac{\sqrt{3} \cdot s}{2} = \frac{\sqrt{3} \cdot \sqrt{6}}{2} = \underline{\underline{\frac{\sqrt{18}}{2} \text{ cm l}}}$



$A = \frac{s \cdot h}{2} = \frac{\sqrt{6} \cdot \frac{\sqrt{18}}{2}}{2} = \frac{\sqrt{108}}{4} = \frac{3\sqrt{6} \cdot \sqrt{3}}{4} = \underline{\underline{1,5 \cdot \sqrt{3} \text{ cm}^2 \text{ l}}}$

$$\underline{8.} \quad r^2 = a^2 + \frac{s^2}{4} \quad | \cdot 4$$

$$4r^2 = 4a^2 + s^2 \quad | - 4a^2$$

$$s^2 = 4r^2 - 4a^2 \quad | \sqrt{\quad}$$

$$s = \sqrt{4(r^2 - a^2)} = 2 \cdot \sqrt{r^2 - a^2}$$

①

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

$$= 2 \cdot \sqrt{384 - 64}$$

$$= 2 \cdot \sqrt{320} = 2 \cdot 8 \cdot \sqrt{5} = \underline{\underline{16 \cdot \sqrt{5} \text{ cm}}}$$

$$\underline{9.} \quad a.) \quad \sqrt{50x^{49}} = \sqrt{2 \cdot 25 \cdot x^{48}} = \underline{\underline{5x^{24} \cdot \sqrt{2x}}}$$

$$b.) \quad \sqrt{8x^8 \cdot 9y^8} = \sqrt{2 \cdot 4 \cdot x^8 \cdot 9 \cdot y^8} = 2x^4 \cdot 3y^4 \cdot \sqrt{2y}$$

$$= \underline{\underline{6x^4 y^4 \cdot \sqrt{2y}}}$$

$$c.) \quad \sqrt{3x^2} \cdot \sqrt{4x^4} \cdot \sqrt{5x^5} = \sqrt{3x^2 \cdot 4x^4 \cdot 5x^5} = \sqrt{3 \cdot 4 \cdot 5 \cdot x^2 \cdot x^4 \cdot x^5}$$

$$= x \cdot 2 \cdot x^2 \cdot x^2 \cdot \sqrt{15x^2} = \underline{\underline{2x^5 \sqrt{15}}}$$

$$\underline{3.} \quad d.) \quad \sqrt{50x^3 y^3} : \sqrt{0,25x^2 y} = \sqrt{\frac{200 \cancel{50} x^{\cancel{3}} y^{\cancel{3}}}{10 \cancel{5} x^{\cancel{2}} y}} = \sqrt{200xy^2}$$

$$= \sqrt{2 \cdot 100 \cdot x \cdot y^2} = \underline{\underline{10y \cdot \sqrt{2x}}}$$

$$e.) \quad \sqrt{x^6 y^2} : \left( \sqrt{x^2 y^6} : \sqrt{\frac{x^2}{y^6}} \right) = x^3 y : \left( x y^3 : \frac{x}{y^6} \right) =$$

$$x^3 y : \left( x y^3 \cdot \frac{y^6}{x} \right) = x^3 y : \left( \frac{\cancel{x} y^9}{\cancel{x}_1} \right) = x^3 y : y^9 =$$

$$\frac{x^3 y^1}{y^9} = \underline{\underline{\frac{x^3}{y^8}}}$$

$$f.) \quad \sqrt{\frac{xy^2 z}{16}} \cdot \left( \sqrt{\frac{4x}{5z}} : \sqrt{\frac{5}{x}} \right) = \sqrt{\frac{xy^2 z}{16}} \cdot \sqrt{\frac{4x \cdot x}{5z \cdot 5}} = \sqrt{\frac{xy^2 z \cdot \cancel{4} x^2}{16 \cdot 25 \cancel{z}_1}} =$$

$$\frac{xy \cdot \sqrt{x}}{10}$$