

1.

$$a.) \sqrt{\frac{100}{x^{100}}} = \frac{10}{x^{50}} \quad \frac{1}{2}$$

$$b.) \sqrt{0,16 x^{16} y^4} = \underline{0,4 x^8 y^2} \quad \frac{1}{2}$$

$$c.) \sqrt{1,6} \cdot \sqrt{40} = \sqrt{64} = \underline{8} \quad \frac{1}{2}$$

$$d.) \sqrt{\frac{7}{18x^3}} : \sqrt{14x^7} = \sqrt{\frac{7}{18x^3}} : \sqrt{\frac{14x^7}{1}} = \sqrt{\frac{7^1}{18x^3} \cdot \frac{1}{14x^7}} =$$

$$\sqrt{\frac{1}{36x^{10}}} = \frac{1}{6x^5} \quad \frac{1}{2}$$

3

$$e.) \sqrt{0,12} : \sqrt{\frac{4}{5}} = \sqrt{\frac{1}{5} \cdot \frac{1,5}{4}} = \sqrt{\frac{1}{4}} = \underline{\frac{1}{2}} \quad \frac{1}{2}$$

$$f.) \sqrt{6xy} \cdot (\sqrt{3xy^2} : \sqrt{\frac{x^2}{8y}}) = \sqrt{6xy} \cdot \left( \sqrt{\frac{3xy^2}{1} \cdot \frac{8y}{x^2}} \right) =$$

$$\sqrt{\frac{6xy}{1} \cdot \frac{24y^3}{x}} = \sqrt{144y^4} = \underline{12y^2} \quad \frac{1}{2}$$

2.

1

$$a^2 = (0,3x^4 \cdot \sqrt{5x^6})^2 = (0,3x^4 \cdot \sqrt{5x^6}) \cdot (0,3x^4 \cdot \sqrt{5x^6})$$

$$= 0,09x^8 \cdot 5x^6 = \underline{0,45x^{14}} \quad 1$$

3.

1

$$6 \cdot \sqrt{12} = \sqrt{36} \cdot \sqrt{12} = \underline{\sqrt{432}}$$

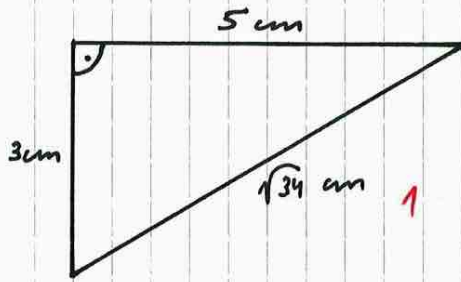
$$7 \cdot \sqrt{11} = \sqrt{49} \cdot \sqrt{11} = \underline{\sqrt{539}}$$

$$5 \cdot \sqrt{13} = \sqrt{25} \cdot \sqrt{13} = \underline{\sqrt{325}}$$

$$4 \cdot \sqrt{15} = \sqrt{16} \cdot \sqrt{15} = \underline{\sqrt{240}}$$

$$\underline{4 \cdot \sqrt{15} < 5 \cdot \sqrt{13} < 6 \cdot \sqrt{12} < 7 \cdot \sqrt{11}} \quad 1$$

4.



$$\sqrt{5^2 + 3^2} =$$

$$\sqrt{25 + 9} =$$

$$\sqrt{34}$$

①

5.

$$b = \frac{A}{a} = \frac{\sqrt{80} \text{ cm}^2}{4 \text{ cm}} = \frac{\sqrt{80}}{4} \text{ cm} = \sqrt{5} \text{ cm} \quad \frac{1}{2}$$

①

$$d = \sqrt{a^2 + b^2} = \sqrt{4^2 + (\sqrt{5})^2} = \sqrt{16 + 5} = \sqrt{21} \text{ cm} \quad \frac{1}{2}$$

6.

a.)  $\checkmark$   $\frac{1}{4}$

b.)  $\checkmark$   $\frac{1}{4}$

①  $\frac{1}{2}$

c.)  $\checkmark$   $\frac{1}{4}$

d.)  $\checkmark$   $\frac{1}{4}$

e.)  $f$   $\frac{1}{4}$

f.)  $\checkmark$   $\frac{1}{4}$

7.

$$d^2 = s^2 + s^2 = 2s^2$$

①

$$s = \sqrt{\frac{d^2}{2}} = \sqrt{\frac{(\sqrt{50})^2}{2}} = \sqrt{\frac{50}{2}} = \sqrt{25} = \underline{5 \text{ cm}} \quad \frac{1}{2}$$

9 1/2 P.