**2. Klassenarbeit Mathematik Klasse G8c 22.12.2015**

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| **A1** | **A2** | **A3** | **A4** | **** |
| **8** | **8** | **7** | **7** | **30** |
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**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**A1** Berechne.

 a) $\sqrt{289}$ b) $\sqrt{0,36}$ c) $\sqrt{\frac{144}{256}}$ d) $\sqrt{250000}$

 e) $(\sqrt{37})^{2}$ f) $\sqrt{(-73)^{2}}$ g) $\sqrt{\frac{-40}{-810}}$ h) $\sqrt{6^{2}+8^{2}}$

**A2** Berechne.

 a) $\sqrt{18}+\sqrt{32}$ b) $\frac{\sqrt{28}-\sqrt{63}}{\sqrt{7}}$ c)$\sqrt{6}∙\sqrt{96}$

 d) $(\sqrt{20}+\sqrt{45})^{2}$ e) $(\sqrt{11}-\sqrt{8})∙(\sqrt{8}+\sqrt{11})$ f) $\sqrt{25∙196∙81}$

**A3** Vereinfache soweit wie möglich.

 a) $\frac{\sqrt{72y^{2}x}}{\sqrt{2x}}$ b) $\sqrt{75x}∙\frac{\sqrt{21x}}{\sqrt{28y^{4}}}$ c) $\sqrt{\left(3a-b\right)\left(3a+b\right)+b^{2}}$

 d) $\sqrt{81x^{2}-36xy+4y^{2}}$ e) $\frac{\sqrt{2a}+\sqrt{50a}}{\sqrt{2a}+2\sqrt{2a}}$ f) $\sqrt{8x\sqrt{4x^{2}}}$

**A4** Löse die Gleichung.

 a) $\left(2x+5\right)^{2}=5\left(4x+11\right)+6$ b) $\frac{1}{2}x^{2}-\frac{3}{4}x+1=3\left(x^{2}-0,25x\right)-9$

 c) $(x-3)^{2}=-6x$ d) $\left(0,5x-4\right)\left(2x+3\right)=x^{2}+1$

**A5 (Bonus)** Löse die Gleichung $x^{4}+2x^{2}-24=0$ .

**Viel Erfolg!**