Multiply and Divide Properties of Radicals HW

Simplify the following radicals and circle your final answer. Do not give decimal answers.

1. $\sqrt[3]{108}$

2. $\sqrt[3]{5} \cdot \sqrt[3]{25}$

3. $\sqrt{\frac{405}{5}}$

4. $\frac{\sqrt[3]{64}}{\sqrt[3]{8}}$

5. $\frac{\sqrt[4]{8}}{\sqrt[4]{5}}$

6. $\sqrt[3]{7} \cdot \sqrt[3]{49}$

7. $\sqrt[3]{\frac{108}{4}}$

8. $\sqrt{3} \cdot \sqrt{27}$

9. $\frac{\sqrt[6]{7}}{\sqrt[6]{2}}$

10. $\frac{\sqrt{147}}{\sqrt{3}}$

11. $(4+\sqrt{2})(3-\sqrt{2})$

12. $(\sqrt{2}+3\sqrt{5})(2\sqrt{2}+4\sqrt{5})$

13) $(\sqrt{8}+5)(\sqrt{8}-5)$

Rationalize the denominator.

14) $\dfrac{6}{2-\sqrt{5}}$

15) $\dfrac{3+\sqrt{8}}{1-\sqrt{8}}$

16) $\dfrac{6+\sqrt{7}}{4+2\sqrt{7}}$