1. Use the product rule to multiply.

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

   $\sqrt[3]{6} \cdot \sqrt[3]{7} = $ _____

   (Type an exact answer, using radicals as needed. Simplify your answer.)

2. Use the product rule to multiply. Assume that all variables represent positive real numbers.

   $$\sqrt[4]{2x^3} \cdot \sqrt[4]{3}$$

   $\sqrt[4]{2x^3} \cdot \sqrt[4]{3} = $ _____

   (Type an exact answer, using radicals as needed. Simplify your answer.)

3. Use the quotient rule to simplify.

   $$\sqrt[3]{\dfrac{7}{27}}$$

   $\sqrt[3]{\dfrac{7}{27}} = $ _____

   (Type an exact answer, using radicals as needed. Simplify your answer.)

4. Simplify.

   $$\sqrt[3]{135}$$

   $\sqrt[3]{135} = $ _____

5. Use the quotient rule to divide. Then simplify if possible.

   $$\dfrac{3\sqrt[4]{48}}{\sqrt[4]{3}}$$

   $\dfrac{3\sqrt[4]{48}}{\sqrt[4]{3}} = $ _____

   (Type an exact answer, using radicals as needed. Simplify your answer.)

6. Rationalize the denominator of $\dfrac{7}{\sqrt[3]{6}}$.

   $\dfrac{7}{\sqrt[3]{6}} = $ _____ (Type an exact answer, using radicals as needed.)

1. $\sqrt[3]{42}$

2. $\sqrt[4]{6x^3}$

3. $\dfrac{\sqrt[3]{7}}{3}$

4. $3\sqrt[3]{5}$

5. 6

6. $\dfrac{7\sqrt[3]{36}}{6}$