1 Multiplication and Division of Radicals 8.2

By the end of this section, you should be able to solve the following problems.

1. Use the product rule and simplify the expression. Assume that all variables are positive.
$$\sqrt{98x^5y^3} \cdot \sqrt{4x^2y^2}$$

2. Simplify the radical.
$$\sqrt{128}$$

3. Perform the indicated operations and simplify (the variables represent positive numbers).
$$\frac{\sqrt{15x^3y}}{\sqrt{3xy}}$$

4. Perform the indicated operations and simplify (the variables represent positive numbers).
$$\frac{\sqrt{12a^3b}}{\sqrt{24a^2b^2}}$$

2 Concepts

Multiplying radicals is related to our rules for exponents. When we multiply radicals, we rewrite radicals as rational powers and apply the rule $a^n b^n =$