**MULTIPLYING AND DIVIDING RATIONAL NUMBERS**

To multiply or divide rational *expressions* we use the same techniques as with rational *numbers*.

Ex1. ×

Ex2. ×

Ex3. ÷

**MULTIPLYING AND DIVIDING RATIONAL EXPRESSIONS**

|  |  |  |
| --- | --- | --- |
| For rational expressions and :  × with restrictions Q ≠ 0, S ≠ 0  ÷× with restrictions Q ≠ 0, S ≠ 0, R ≠ 0 | | |
| **Ex1**. ×  \*\* | **Ex2.** ÷  D: { x ∈ ℝ | x ≠ -5, x ≠ -4, x ≠ -3, x ≠ 2 } | | |
| **SUMMARY**   * Factor numerators and denominators * Note restrictions on the variables (denominators, and numerators of divisors) * If applicable, rewrite division as multiplication by the reciprocal * Write as a single rational expression * Reduce by cancelling common factors * Write the simplified rational expression * Formally state all restrictions on the domain | |