

Complete the following tables using exact values (no decimals).

+	5	$\frac{1}{2}$	0	$\sqrt{2}$	$-\sqrt{2}$	$\pi$
5	10	$\frac{5}{2}$				
$\frac{1}{2}$						
0						
$\sqrt{2}$						
$-\sqrt{2}$						
$\pi$						

x	5	$\frac{1}{2}$	0	$\sqrt{2}$	$\frac{1}{\sqrt{2}}$	$\pi$
5	25	$\frac{5}{2}$				
$\frac{1}{2}$						
0						
$\sqrt{2}$						
$\frac{1}{\sqrt{2}}$						
$\pi$						

Based on the information from your chart, conjecture which of the statements is ALWAYS true, which is SOMETIMES true, and which is NEVER true.

- The sum of a rational number and a rational number is rational.
- The sum of a rational number and an irrational number is irrational.
- The sum of an irrational number and an irrational number is irrational.
- The product of a rational number and a rational number is rational.
- The product of a rational number and an irrational number is irrational.
- The product of an irrational number and an irrational number is irrational.