

NS The Number System

- **7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.**
 - **7.NS.A.1 Apply and extend previous understandings of addition and subtraction to add and subtract integers and other rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.**
 - **7.NS.A.1.a Describe situations in which opposite quantities combine to make zero.**
 - [Absolute value and opposite integers \(7-B.4\)](#)
 - [Quantities that combine to zero: word problems \(7-B.5\)](#)
 - **7.NS.A.1.b Understand $p + q$ as the number located a distance $|q|$ from p , in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.**
 - [Integer addition rules \(7-C.1\)](#)
 - [Add integers using number lines \(7-C.3\)](#)
 - [Integer addition and subtraction rules \(7-C.10\)](#)
 - [Apply addition and subtraction rules \(7-H.13\)](#)
 - **7.NS.A.1.c Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.**
 - [Integer subtraction rules \(7-C.6\)](#)
 - [Subtract integers using number lines \(7-C.8\)](#)
 - [Integer addition and subtraction rules \(7-C.10\)](#)
 - [Apply addition and subtraction rules \(7-H.13\)](#)
 - **7.NS.A.1.d Apply properties of operations as strategies to add and subtract rational numbers.**
 - [Add integers using counters \(7-C.2\)](#)
 - [Add integers \(7-C.4\)](#)
 - [Subtract integers using counters \(7-C.7\)](#)
 - [Subtract integers \(7-C.9\)](#)
 - [Add and subtract integers using counters \(7-C.11\)](#)
 - [Add and subtract integers \(7-C.12\)](#) (100) 🍌
 - [Add and subtract decimals \(7-E.1\)](#)
 - [Add and subtract fractions \(7-G.1\)](#)
 - [Add and subtract mixed numbers \(7-G.3\)](#)
 - [Add and subtract positive and negative decimals \(7-H.9\)](#)
 - [Add and subtract positive and negative fractions \(7-H.10\)](#)
 - [Add and subtract rational numbers \(7-H.11\)](#)
 - **7.NS.A.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide integers and other rational numbers.**
 - **7.NS.A.2.a Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules**

for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.

- [Understand multiplying by a negative integer using a number line \(7-C.\)](#)
- [Integer multiplication rules \(7-C.15\)](#)
- [Integer multiplication and division rules \(7-C.20\)](#)
- [Apply multiplication and division rules \(7-H.18\)](#)
- **7.NS.A.2.b Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.**
 - [Integer division rules \(7-C.17\)](#)
 - [Equal quotients of integers \(7-C.18\)](#)
 - [Integer multiplication and division rules \(7-C.20\)](#)
 - [Identify quotients of rational numbers: word problems \(7-H.14\)](#)
 - [Apply multiplication and division rules \(7-H.18\)](#)
- **7.NS.A.2.c Apply properties of operations as strategies to multiply and divide rational numbers.**
 - [Multiply integers \(7-C.16\)](#)
 - [Divide integers \(7-C.19\)](#)
 - [Multiply and divide integers \(7-C.21\)](#)
 - [Multiply decimals \(7-E.3\)](#)
 - [Divide decimals \(7-E.5\)](#)
 - [Multiply fractions and whole numbers \(7-G.7\)](#)
 - [Multiply fractions \(7-G.9\)](#)
 - [Multiply mixed numbers \(7-G.10\)](#)
 - [Divide fractions \(7-G.12\)](#)
 - [Divide mixed numbers \(7-G.13\)](#)
 - [Multiply and divide positive and negative decimals \(7-H.15\)](#)
 - [Multiply and divide positive and negative fractions \(7-H.16\)](#)
 - [Multiply and divide rational numbers \(7-H.17\)](#)
- **7.NS.A.2.d Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.**
 - [Classify numbers \(7-A.11\)](#)
 - [Convert fractions or mixed numbers to decimals \(7-H.1\)](#)
- **7.NS.A.3 Solve real-world and mathematical problems involving the four operations with integers and other rational numbers.**
 - [Complete addition and subtraction equations with integers \(7-C.13\)](#)
 - [Add and subtract integers: word problems \(7-C.14\)](#)
 - [Complete multiplication and division equations with integers \(7-C.22\)](#)
 - [Add, subtract, multiply, and divide integers \(7-C.23\)](#)
 - [Add and subtract decimals: word problems \(7-E.2\)](#)
 - [Multiply decimals and whole numbers: word problems \(7-E.4\)](#)
 - [Divide decimals by whole numbers: word problems \(7-E.6\)](#)
 - [Add, subtract, multiply, and divide decimals: word problems \(7-E.8\)](#)
 - [Add and subtract fractions: word problems \(7-G.2\)](#)
 - [Add and subtract mixed numbers: word problems \(7-G.4\)](#)

- [Multiply fractions and mixed numbers: word problems \(7-G.11\)](#)
- [Divide fractions and mixed numbers: word problems \(7-G.14\)](#)
- [Add, subtract, multiply, and divide fractions and mixed numbers: word problems \(7-G.16\)](#)
- [Add, subtract, multiply, and divide money amounts: word problems \(7-M.1\)](#)
- [Price lists \(7-M.2\)](#)
- [Estimate to solve word problems \(7-N.1\)](#)