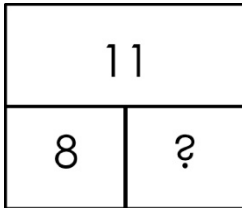


## Work with addition and subtraction equations

**Standard 1.OA.8** Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations  $8 + ? = 11$ ,  $5 = ? - 3$ ,  $6 + 6 = ?$

**Key Elements:** Students need to understand the relationship between the three related numbers. They can use related facts to help them solve these equations. Equations with the whole or solution missing ( $6+6=?$ ) are easier for students to solve than equations with the change missing/unknown ( $8+?=11$ ). Equations with the change unknown are easier to solve than equations with the start unknown ( $5=?+3$ ).

**Part/Part/Whole:** This model shows the relationship between the unknown quantity and the known quantities in an equation. The whole is at the top and the parts are recorded beneath. In the models below, students can choose to use counting on, addition, or subtraction to find the missing part.



**Math Mountain:** This model is also known as a Number Bond. It also shows the relationship between the numbers. The total is at the top and each part is at the bottom. In the models below, students can choose to use counting on, addition, or subtraction to find the missing part.

**Circle Drawings:** Circle drawings can be used for addition and subtraction problems. When adding two parts together to find the whole, students use a break apart stick to show the

different parts. When using circle drawings to show subtraction, students cross out the amount being subtracted.

$5 = ? - 3$

$6 + 6 = ?$