

Resting on ten

Purpose

To understand and use the strategy of *bridging to ten* to solve two-digit additions

Outcomes

NS1.2 Uses a range of mental strategies and informal recording methods for addition and subtraction involving one- and two-digit numbers

NS2.2 Uses mental and written strategies for addition and subtraction involving two-, three- and four-digit numbers

MA1- 5NA, NA2-5NA

Framework reference

To move students to Place value level 2

Teaching point

Friends of ten refers to pairs of whole numbers that add up to ten.



Suggested *Short, focussed, frequent* activity

	Outline	Questions									
Introduction	<p>Provide the students with pen and paper and have them draw a 3 x 3 grid.</p> <div style="text-align: center;"> <table border="1" style="border-collapse: collapse; width: 80px; height: 80px;"> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table> </div> <p>Have the students write the numerals <i>one</i> to <i>nine</i> in random order in the grid. Ask them to cross out on their grid all the pairs of numbers that are <i>friends of ten</i> and circle the number that is left.</p>										<p><i>Which numeral should be the circled one on every grid? How do you know?</i></p>
Concept development	<p>Write on the board:</p> $59 + 6$ <p>Have students represent their solution strategy on the board.</p> <p>If no student suggests using a <i>bridging to ten</i> strategy, draw on the board the following diagram:</p> <div style="text-align: center;"> $\begin{array}{r} 59 + 6 \\ \swarrow \quad \searrow \\ 1 \quad 5 \end{array}$ </div>	<p><i>How could we use friends of ten to solve this addition?</i></p> <p><i>How could this diagram help you to solve</i></p>									



	Outline	Questions
Strengthening the concept	<p>Write on the board:</p> $48 + 25$ <p>In pairs, have the students work to solve the addition using the <i>bridging to ten</i> strategy and represent the process on an empty number line.</p> <p>Have students share their drawings with the class and explain the strategy that they used for solving the problem.</p> <p>Have each student write two or three additions that could be solved using the <i>bridging to ten</i> strategy and swap these with a partner.</p> <p>Discuss with the students how they solved the additions provided by their partners.</p>	<p><i>Did you need to represent the strategy for solving the addition on an empty number line? Why?</i></p>

