

Exploring the hundreds chart

Investigation 1

Add up the first ten counting numbers without a calculator (ie. $1 + 2 + 3 + \dots + 10$) and *explain* your method by recording in the space below.

Investigation 2

Now, add up the first 100 counting numbers without a calculator (ie. $1 + 2 + 3 + \dots + 99 + 100$) and *explain* your method by recording in the space below.

Exploring the calendar

Investigation

- (a) Open your diary to the calendar for the month of June.
(b) Record the dates on the blank calendar below.

June 2005

S	M	T	W	T	F	S

(c) What *patterns* can you see in the Tuesday dates? _____

(d) What *patterns* can you see in the Monday dates? _____

(e) *Justify* your answers to parts (c) and (d) _____

(f) Using the dates in the shaded squares, what do you notice about the sums of the diagonals and the sums of the horizontal and vertical centre lines?

(g) *Explain* why this happens by *using algebra*.