

# Enrich

## Puzzling Over Data

Each puzzle on this page contains an incomplete set of data. The clues give you information about the mean, median, mode, or range of the data. Working from these clues, you can decide what the missing data items must be. For example, this is how you might solve the data puzzle at the right.

*Clue:* mean = 18

*Data:* 12, 17, 18, 19, 19,

There are 6 items of data.

The mean is 18, so the sum of the data must be  $6 \times 18 = 108$ .

Add the given data:  $12 + 17 + 18 + 19 + 19 = 85$ .

Subtract from 108:  $108 - 85 = 23$ .

So the complete set of data is: 12, 17, 18, 19, 19,  23.

**Find the missing data. Assume that the data items are listed in order from least to greatest.**

1. *Clue:* mode = 8

*Data:* 7, 7, 8, , , 14

2. *Clue:* median = 54.5

*Data:* 36, 40, 49, , 65, 84

3. *Clues:* mean = 27  
mode = 30

*Data:* 10, 25, 27, , 30,

4. *Clues:* median = 120  
range = 46

*Data:* 110, 112, , 124, 136,

5. *Clues:* mean = 13  
median = 13  
range = 13

*Data:* , 9, 12, , 18,

6. *Clues:* mean = 7  
median = 8.5  
mode = 10

*Data:* , 4, 8, , ,

7. *Clues:* mean = 60  
mode = 52  
range = 28

*Data:* , 52, , , 72, 78

8. *Clues:* median = 24  
mode = 28  
range = 24

*Data:* 6, 15, , , ,