



## Problem of the Week

### Grade 7 and 8

### Pressure's On Solution

#### Problem

Willy Makit is participating at the local level of a competition in which he competes in 10 events. In each event the maximum possible score is 10 points. To advance to the regional level a competitor must earn a minimum total score of 75 points. On the first five events, Willy had an average score of 6.8. On the next three events his average score was 7.2. What must Willy average on his final two events in order to have a total score of exactly 75 points?

#### Solution

To determine an average, we add the numbers together and divide the total by the number of numbers.

$$\text{Average} = \frac{\text{Total}}{\text{Number of Numbers}}$$

So to determine the total we would multiply the average by the number of numbers.

$$\text{Total} = \text{Average} \times \text{Number of Numbers}$$

$$\text{Total Score for First 5 Events} = 6.8 \times 5 = 34.0$$

$$\text{Total Score for Next 3 Events} = 7.2 \times 3 = 21.6$$

$$\text{Total Score to Move On} = 75.0$$

$$\text{Total Score Needed for Last Two Events} = 75.0 - 34.0 - 21.6 = 19.4$$

$$\text{Average Score for Final 2 Events} = 19.4 \div 2 = 9.7$$

Willy needs to average 9.7, near perfect scores, on his last two events to have a total score of exactly 75 points in order to advance to the regional round of the competition. The pressure is definitely on!

