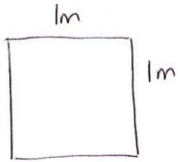


## Maths Problem Solving Solutions

Due to the nature of some of the problems, there is often not one 'correct' solution. Below you will find marking guides and sample solutions to give an indication of what your answers might have looked like.

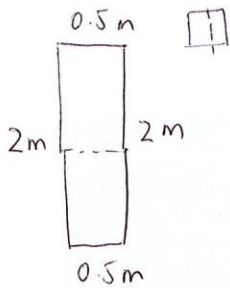
# Senior – Granny's Rug

Granny's Rug



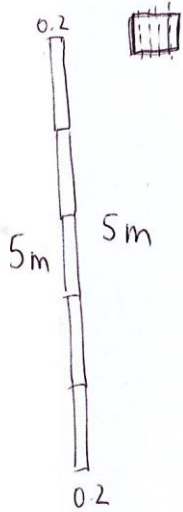
$$P = 4m$$

$$A = 1m^2$$



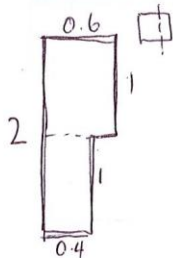
$$P = 5m$$

$$A = 1m^2$$



$$P = 10.4m$$

$$A = 1m^2$$



$$P = 5.2m$$

$$A = 1m^2$$

Any of these may fit  
Granny's Hallway.  
The area stays the  
same - because I always  
start with  $1m^2$  and  
I use all of the rug.  
The perimeter changes  
each time depending  
on where and how many  
times I cut the rug.

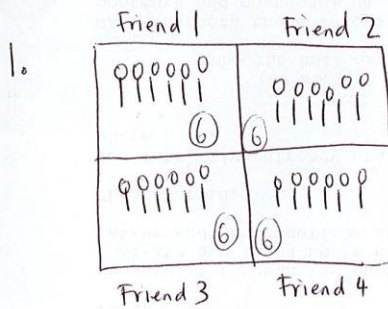
### Marking Guide

- 1 Mark - 3 or more possible solutions shown
- 1 Mark - Correct perimeter length calculated and recorded
- 1 Mark - Acknowledgement that area remains constant

Total Marks /3

## Middle – Sharing 25


### Sharing 25

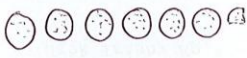


Each friend gets 6 balloons.  
 There is one leftover.  
 Maybe they could find a child to give it to.

OR  $4 \overline{)25} \begin{array}{r} 6 \\ \underline{24} \\ 1 \end{array} \text{ r } 1$

2. I know from Q1 that four friends would get 6 balloons each with 1 leftover so I know that 4 friends would get \$6 each with \$1.00 leftover. I can divide \$1 between 4 people, they would get 25c each. So each person would get \$6.25

3 Same as before.  $25 \div 4 = 6 \text{ r } 1$   
 This time I could cut the last biscuit up into quarters  Each person would get  $6 \frac{1}{4}$  biscuits



#### Marking Guide

Q1. 6 balloons each, 1 remainder /1

Q2. \$6.25 each /1

Q3.  $6 \frac{1}{4}$  each /1

Total Marks /3

## Junior

### Marking Guide

Choose the category that best applies.

**4 Points:** Appropriate age in years (or months for a baby) given in each category: baby 0-2, child 1-12, teenager 13-19, parent 20+, grandparent 45+ (these final 2 will depend on the experiences of the child). Correct sequence of all drawings and explanation given.

**3 Points:** Appropriate ages and correct sequence with 1 error.

**2 Points:** Correctly orders most of the drawings from youngest to oldest but unable to determine appropriate ages for some categories

**1 Point:** Able to order some of the drawings from youngest to oldest