GradReady

Areas and Conversions

Question 1
Answer: E, 86m2

This type of question encourages students to use a mental calculation to calculate the length of missing sides and use whiteboards if necessary to note the accurate values.

To calculate how much carpet is needed, the student needs to calculate the total area of the bedrooms.

Area of Bedroom 1 = 4m x 4m
= 16m2

Area of Bedroom 2 & 3 = 6m x (11m - 4m)
= 42m2

Area of the Master Bedroom = 4m x (11m - 4m)
= 4m x 7m
= 28m2

Total area of the bedrooms = 16m2 + 42m2 + 28m2
= 86m2

The student needs to check the units of the answers; the correct unit for this question is m2.

Thus, the answer is E, 86m2.

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Question 2
Answer: C, 1.75

This type of question encourages students to use a mental calculation to calculate the length of missing sides and use whiteboards if necessary to note the accurate values.

Area of Master Bedroom = 4m x (11m - 4m)
= 4m x 7m
= 28m2

Area of Bedroom 1 = 4m x 4m
= 16m2

To calculate how many times the Master Bedroom is bigger than Bedroom 1, one needs to divide the area of the Master Bedroom by the area of Bedroom 1 = 28m2 / 16m2 = 1.75

Thus, the answer is C, 1.75

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Question 3
Answer: D, 37.6m2

This type of question encourages students to use a mental calculation to calculate the length of missing sides and form one equation to save time in solving this question.

Space leftover = (Area of Living & Dining Room) - (Area of the dining table)
= (10m x 4m) - (2m x 1.2m)
= 37.6m2

Thus, the answer is D, 37.6m2.

Question 4
Answer: E, $88.20

Area of the porch = 4m x 3m
= 12m2

The timber flooring company charges $15.00 for every 5m2. This is equivalent to $3.00 for every 1m2 by dividing the values by 5.

Total cost of timber flooring = 12 x $4.35 + 12 x $3
= $88.20

Thus, the answer is E, $88.20.