Equivalent Ratio Word Problem Worksheet

1. The Business Direct Hotel caters to people who travel for different types of business trips. On Saturday night there is not a lot of business travel, so the ratio of the number of occupied rooms to the number of unoccupied rooms is 2:5. However, on Sunday night the ratio of the number of occupied rooms to the number of unoccupied rooms is 6:1 due to the number of business people attending a large conference in the area. If the Business Direct Hotel has 432 occupied rooms on Sunday night, how many unoccupied rooms does it have on Saturday night?

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Saturday

Occupied Rooms

Unoccupied Rooms

There were 360 unoccupied rooms on Saturday night.

Sunday

Occupied Rooms

Unoccupied Rooms

The total number of rooms in the hotel remains the same and the total number of parts in the ratios remains the same (2+5 = 6+1=7). There are still seven sections on the tape diagram, but they are distributed between occupied and unoccupied rooms differently

On Sunday night, the total number of occupied rooms is 432,and there are 6 sections on the tape diagram. So, each section represents 72 rooms

On Saturday night, the number of unoccupied rooms is represented by 5 sections. Since each section represent 72 rooms, the number of unoccupied rooms was 72 x 5 = 360.

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