141. Key: C

There are 10 (5 choose 3) ways to select the three columns in which the three items will appear. The row of the rightmost selected item can be chosen in any of six ways, the row of the leftmost selected item can then be chosen in any of five ways, and the row of the middle selected item can then be chosen in any of four ways. The answer is thus (10)(6)(5)(4) = 1200. Alternatively, there are 30 ways to select the first item. Because there are 10 squares in the row or column of the first selected item, there are 30 − 10 = 20 ways to select the second item. Because there are 18 squares in the rows or columns of the first and second selected items, there are 30 − 18 = 12 ways to select the third item. The number of permutations of three qualifying items is (30)(20)(12). The number of combinations is thus (30)(20)(12)/3! = 1200.

142. Key: B

The expected bonus for a high-risk driver is 0.8 · 12 (months) · 5.00 = 48.
The expected bonus for a low-risk driver is 0.9 · 12 (months) · 5.00 = 54.
The expected bonus payment from the insurer is 600 · 48 + 400 · 54 = 50,400.