

# Riddler Express

This week's Express comes just in time for Super Bowl LVII:

In football, a touchdown is worth six points, a one-point conversion is worth one point, a two-point conversion is worth two points, a field goal is worth three points and a safety is worth two points.<sup>2</sup> A team may attempt a conversion only after it has scored a touchdown, and it must decide whether to attempt a one-point conversion or a two-point conversion.

Some methods of scoring points are more common than others. So when a team has scored 14 points, it's safe to assume that they scored two touchdowns and two one-point conversions. But that's not necessarily how those 14 points were scored.

Using the aforementioned methods of scoring, how many distinct ways can a team score 14 points? Note that the sequence in which a team scores these points doesn't matter here. So scoring a field goal and then a safety is the same as a safety and then a field goal (i.e., there is only one distinct way a team can score 5 points).

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*Extra credit:* Using the aforementioned methods of scoring, how many distinct ways can a team score 28 points?