

**Chapter
6**
Performance Task (continued)
Tornado Alley

In some regions of the country, tornadoes are common, while in other regions, they are very rare. What is Tornado Alley and what percent of tornadoes occur there? When do the tornadoes occur most frequently?

Tornado Alley refers to the central region of the United States where tornadoes occur most frequently. On average, more than 500 tornadoes occur in this area each year. Most of the tornadoes occur during the spring season.

- The table shows the average numbers of tornadoes in May and the average annual numbers of tornadoes for 6 of the states in Tornado Alley over a 20-year period. Complete the table. Round your answers for the numbers of tornadoes to the nearest whole number. Round your answers for the percents of tornadoes to the nearest tenth.

State	Average Number of Tornadoes in May	Average Annual Number of Tornadoes	Percent of Tornadoes in May
Texas	43	155	
Oklahoma		62	45.2%
Kansas		96	39.6%
Nebraska	17		29.8%
Iowa	12	51	
Missouri	12		26.7%

In Exercises 2–4, use the proportion $\frac{a}{w} = \frac{p}{100}$, where a is a part of the whole w ,

and $p\%$, or $\frac{p}{100}$, is the percent. Round each part or whole to the nearest whole number. Round each percent to the nearest tenth.

- In Texas, the average number of tornadoes in May was about 154% of the average number of tornadoes in April. Write and solve a proportion to find the average number of tornadoes that occurred in April.

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3. Tornadoes are categorized from EF-0 to EF-5, depending on wind speed and level of destruction. EF-3, EF-4, and EF-5 tornados are considered violent. Over the 20-year period referenced in the table, about 3% of the tornadoes in the U.S. were violent. Write and solve a proportion to find the average number of violent tornadoes in Oklahoma each year.
4. On average, 1253 tornadoes occurred in the U.S. each year over the 20-year period referenced in the table. What percent of the tornadoes occurred in Kansas, Nebraska, and Missouri? Justify your answer using a proportion.
5. Your friends want to know the percent of the average annual 1253 tornadoes that happened in the 6 states shown in the table. Jasmine finds the percent of U.S. tornadoes for each state in the table and then adds the percents. Mark adds the number of tornadoes for each state in the table and then finds the percent. Explain why both methods work.