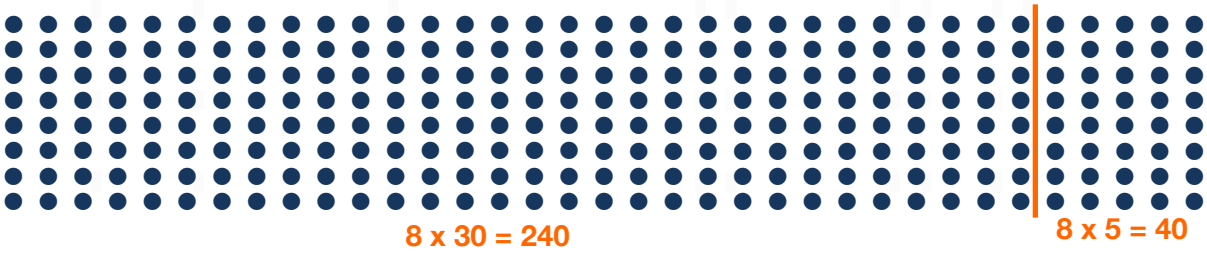
Difficult Multiplication Facts
Extend Your Learning
Answers and Explanations

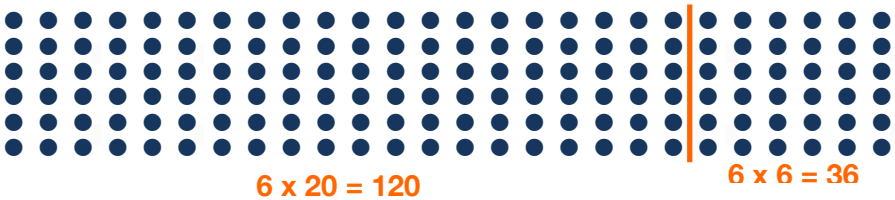
Split the array of dots into two parts. Explain how you can use the two parts to mentally determine the answer.

1. 8 x 35 = **280**



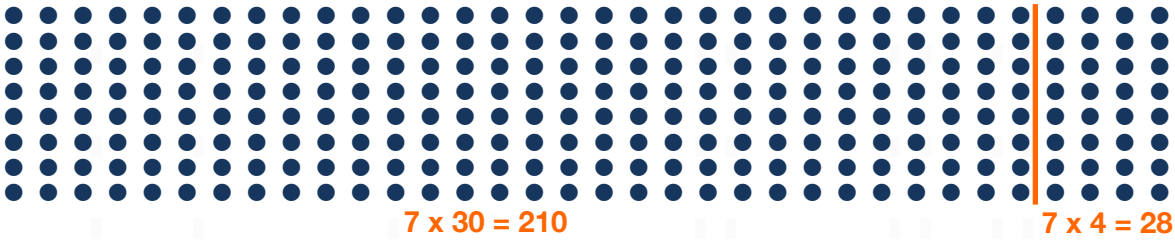
8 x 35 is the same as 8 x 30, or 240, plus 8 x 5, or 40. 240 + 40 = 280.

2. 6 x 26 = **156**



6 x 26 is the same as 6 x 20, or 120, plus 6 x 6, or 36. 120 + 36 = 156.

3. 7 x 34 = **238**



7 x 34 is the same as 7 x 30, or 210, plus 7 x 4, or 28. 210 + 28 = 238.

Use mental math to solve the following problems. Explain your reasoning.

4. A typical school bus has 2 rows of seats with an 18-inch aisle in between the rows. If there are 12 seats on each side of the aisle and 3 children can sit in each seat, how many children can fit on one bus?

There are 12 seats in each row and two rows, so there are 2 x 12, or 24, seats on the bus. Each seat can hold 3 children, so multiply 24 x 3.

Possible Thinking: 24 x 3 is the same as 20 x 3 plus 4 x 3, which is 60 + 12.

72 students can fit on one bus.

5. A school bus carrying high school students on a field trip stopped at a fast food restaurant on the way back to school. If there were 47 students on the bus and each student was allowed to spend $6 on a meal, how much would it cost to feed the students?
To solve this problem, multiply 47 x 6.
Possible Thinking: 47 x 6 is the same as 40 x 6 plus 7 x 6, which is 240 + 42.
It would cost $282 to feed all the students on the bus.

6. The East Prairie School District has 9 buses. If each bus can hold 72 students, how many students will the buses hold?
To solve this problem, multiply 9 x 72.
Possible Thinking: 9 x 72 is the same as 9 x 70 plus 9 x 2, which is 630 + 18.
The buses will hold 648 students.

7. When Brea played volleyball last season, she had 8 assists in each game. If Brea had a total of 72 assists during the season, how many games did she play?
To solve this problem, divide 72 by 8.
Possible Thinking: Use the related multiplication fact. 8 x ? = 72. 8 x 9 = 72, so 72 ÷ 8 = 9.
Brea played 9 volleyball games last season.

8. Jason was practicing his swimming and decided to swim 12 laps each day. How many laps will Jason swim in one week? How many laps will Jason swim in one month, assuming there are 4 weeks in a month?
To find the number of laps Jason swims in one week, multiply 7 x 12.
Possible Thinking: 7 x 12 is the same as 7 x 10 plus 7 x 2, which is 70 + 14.
To find the number of laps Jason swims in four weeks, multiply 4 x 84.
Possible Thinking: 4 x 84 is the same as 4 x 80 plus 4 x 4, which is 320 + 16.
Jason will swim 84 laps in one week and 336 laps in one month.

9. Jason's brother, Josh, does not swim as fast as Jason. He can only swim 7 laps in the time it takes Jason to swim 12. How many laps can Josh swim in one month if he swims 7 laps every day?
Josh can swim 7 x 7, or 49, laps in one week. Multiply 4 x 49 to find the number of laps Josh can swim in one month.
Possible Thinking: 4 x 49 is the same as 4 x 40 plus 4 x 9, which is 160 + 36.
Josh can swim 196 laps in one month.

10. Shayna was creating a vacation scrapbook. She found that she could put 7 pictures on each page. If Shayna had 280 pictures, how many pages did she need?
To solve this problem, divide 280 by 7.
Possible Thinking: Use the related multiplication fact. 7 x ? = 280. 280 is 28 tens and 7 x 4 tens = 28 tens. 7 x 40 = 280, so 280 ÷ 7 = 40.
Shayna needed 40 pages for her scrapbook.