

Key Concept and Vocabulary

Tours of a museum can have no more than 8 guests. There are 30 guests in line to tour the museum. How many tours are needed?

$$30 \div 8 = 3 \text{ R}6$$

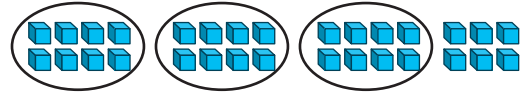
Three tours are full, and 1 tour is *not* full. So, 4 tours are needed.

Think:
 $30 \div 8 = 3 \text{ R}6$
 because
 $8 \times 3 + 6 = 30$.



Visual Model

Divide 30 into equal groups of 8.



There are 3 equal groups of 8, with 1 group of 6 left over. There are 4 groups in all.

Application Example

- Seventy-nine players sign up for a basketball league. Teams can have no more than 10 players.

$$79 \div 10 = 7 \text{ R}9$$

- How many teams are full?
 ✦ The quotient is the number of teams that have 10 players. So, 7 teams are full.
- How many teams are needed?
 ✦ Seven teams are full and 1 team is *not* full. So, 8 teams are needed.
- How many players are on the last team?
 ✦ The remainder is the number of players that are on the last team.

So, 9 players are on the last team.



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- You can fit no more than 6 candles in a box. You have 47 candles. How many boxes do you need?

- Eighty-four students attend math team tryouts. Each team must have 5 students. How many students will *not* be on a team?

- A factory has 1,254 tires. Each new car needs 4 tires. How many new cars can be made?

- READING** A book has 121 pages. You have already read 91 pages. To finish the book, you decide to read 7 pages each day. How many days will it take you to finish the book?

- FIELD DAY** Three classes of 26 students each sign up for a field day. Teams can have no more than 9 students. How many teams are full? How many students are on the last team? Explain.

