



Leftover Players

Let's solve two-step division problems with fluency and make sense of remainders.

Lesson Art Placeholder

Warm-Up



eyes on teacher

I am a doer of math.

What ways can you be flexible in math class today?

Activity 1

How Many Teams?



Show your thinking. **Sample work shown.**

1. A total of 336 basketballs were donated to a school district. The balls are equally shared among 6 schools. If one school wants to put an equal number of its basketballs into 4 storage bins, how many basketballs will go in each bin?

$$\begin{array}{r} 56 \\ 6 \overline{) 336} \\ \underline{-30} \\ 36 \\ \underline{-36} \\ 0 \end{array}$$

$$\begin{array}{r} 14 \\ 4 \overline{) 56} \\ \underline{-4} \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

answer:

14 basketballs

Activity 1 How Many Teams? (continued)

 Show your thinking. **Sample work shown.**

2. There are 280 basketball players signed up for a tournament.
- The players are split evenly into 8 groups.
 - Each group is split into teams of 8 players. Any remaining players will be added to existing teams.

How many teams will be in each group?

$$\begin{array}{r} 35 \\ 8 \overline{) 280} \\ \underline{-24} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

$$\begin{array}{r} 4 \\ 8 \overline{) 35} \\ \underline{-32} \\ 3 \end{array}$$

answer: **4 teams**

3. A total of 252 students signed up to play in the school district's basketball league. The district will form teams of 9 players each. If 3 coaches share the teams equally, how many teams will be left without a coach?

$$\begin{array}{r} 28 \\ 9 \overline{) 252} \\ \underline{-18} \\ 72 \\ \underline{-72} \\ 0 \end{array}$$

$$\begin{array}{r} 9 \\ 3 \overline{) 28} \\ \underline{-27} \\ 1 \end{array}$$

answer: **1 team**

4. Discuss  **Oral activity: No writing expected.**

Justify your solutions to Problems 2 and 3 to your partner and explain how you know your solutions are reasonable.

Summary 5.17

When solving a two-step story problem involving division, the final division calculation may result in a remainder. It is important to consider the context of the problem before deciding how to interpret the remainder.

220 athletes signed up for the neighborhood football tournament. The head coach separated the athletes into 4 equal groups. If each group is split evenly to form 2 football teams, how many athletes will not be on a team?

$$\begin{array}{r} 55 \\ 4 \overline{) 220} \\ \underline{- 20} \\ 20 \\ \underline{- 20} \\ 0 \end{array}$$

$$\begin{array}{r} 27 \\ 2 \overline{) 55} \\ \underline{- 4} \\ 15 \\ \underline{- 14} \\ 1 \end{array}$$

$$1 \times 4 = 4$$

4 athletes will not be on a team.