Graph the Can Drive

Make scaled picture and bar graphs, then compare the data

Name: _____ Date: _____

Part 1 - Scaled Picture Graph

Practice data - made for this worksheet: Four teams collected cans for a school drive.

Team	Cans collected
Ants	8
Bears	12
Cougars	16
Dragons	20

Make a scaled picture graph below. Draw a title. **Key: O = 4 cans.** Draw only whole O symbols.

Team	Picture graph
Ants	
Bears	
Cougars	
Dragons	

Check: Does every O stand for 4 cans? Does your graph show 2, 3, 4, and 5 symbols in the correct rows?

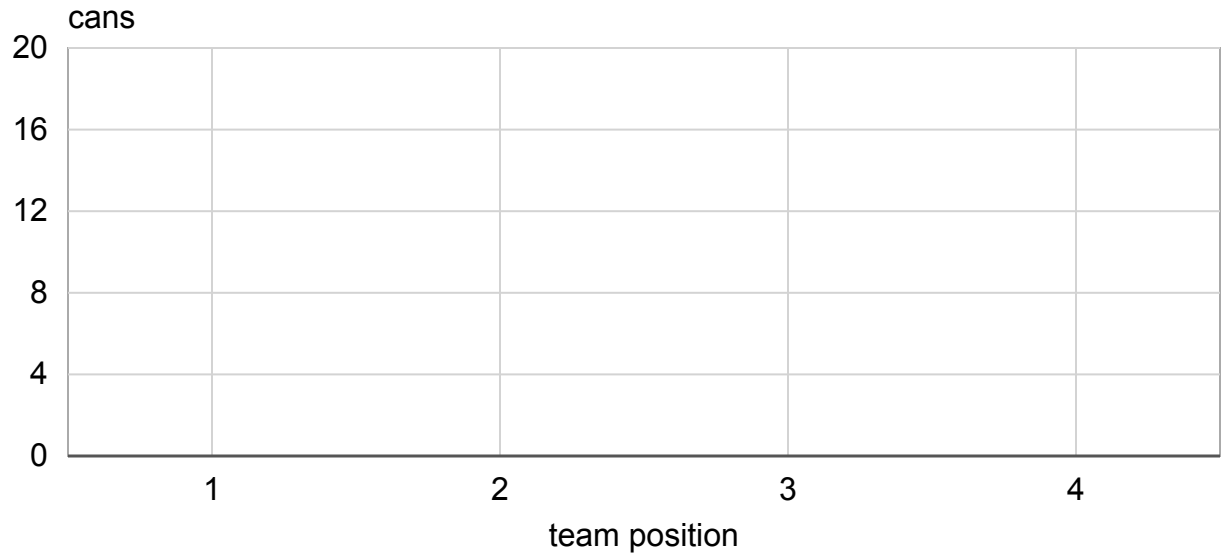
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Part 2 - Scaled Bar Graph and Comparisons

Use the same practice data to make a scaled bar graph. Write A, B, C, and D under 1, 2, 3, and 4. A = Ants, B = Bears, C = Cougars, and D = Dragons. Each step up the graph is **4 cans**. Give your graph a title and draw four bars.



1. How many more cans did Dragons collect than Ants?

2. How many fewer cans did Bears collect than Cougars?

3. Dragons and Bears worked together. Cougars and Ants worked together. How many more cans did the first pair collect? Show two addition equations and a comparison.

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Answer Key and Teaching Notes

Materials and setup: Print and supply all student pages, keeping teacher-key pages separate. Supplied materials are the practice-data table, picture-graph frame, blank bar-graph frame, and comparison questions. Additionally needed: a pencil, eraser, and ruler or straightedge for each student. Have students complete Part 1 before Part 2 so they use the same data in both representations.

Teaching script: “Today, one picture symbol stands for 4 cans. Read the key before you draw. On the bar graph, each horizontal grid step also stands for 4 cans. Start every bar at 0. After you graph the data, use the graph or table to compare amounts. For a two-step question, find each group total first, then compare the totals.”

Observation method: During Part 1, look for students counting by 4 and drawing whole symbols only. During Part 2, check that each bar begins at 0, reaches the correct multiple-of-4 height, and is placed at the correct team position. For Question 3, listen for students adding both pairs before subtracting. Prompt without giving an answer: “What does one symbol or one grid step mean?”

Answers and scoring:
1. Picture graph: title may vary. Ants has 2 O symbols; Bears has 3; Cougars has 4; Dragons has 5. Accept clearly drawn equivalent symbols if the stated key is retained. Score 1 point for correct key/scale and 1 point for all four correct rows.
2. Bar graph: title may vary. At positions 1 through 4, bars should reach 8, 12, 16, and 20 cans. Score 1 point for correct labels/scale and 1 point for all four correct bars beginning at 0.
3. Question 1: 20 - 8 = 12. Dragons collected 12 more cans.
4. Question 2: 16 - 12 = 4. Bears collected 4 fewer cans.
5. Question 3: Dragons plus Bears: 20 + 12 = 32. Cougars plus Ants: 16 + 8 = 24. Then 32 - 24 = 8. The first pair collected 8 more cans. Accept a correct drawing, equation chain, or words that show both totals and the comparison.

Source credit: Skill aligned to NY-3.MD.3, Represent and interpret data. https://lessonmakerpro.com/standards/ny-nextgen-math/ny-3-md-3. The can-drive data are original practice data created for this worksheet.