

Chart Smart

Read measurement graphs and solve real-life questions.

GRADE 4 • 4.MDR.6

4.MDR.6 "Measure time and objects that exist in the world to solve real-life, mathematical problems and analyze graphical displays of data to answer relevant questions."

NAME _____

DATE _____

USE THE KEY

Read the key before you read a graph. Multiply the number of symbols by the amount in the key to find a measurement. To compare two measurements, subtract the smaller amount from the larger amount.

WORKED EXAMPLE

A ribbon graph has this key: each # = 7 cm. The blue ribbon has ###. How long is the blue ribbon?

1. Count 3 symbols.
2. Each symbol stands for 7 cm.
3. 3 groups of 7 cm = $7 + 7 + 7 = 21$ cm.

Answer: 21 cm

PRACTICE 6 problems

- 1** Use this plant-height graph. Plant Heights
Key: each # = 2 cm Basil ##### Mint
Thyme ##### Sage #####
How tall is the basil plant?

ANSWER _____

- 2** Use the plant-height graph in problem 1.
Which plant is the tallest?

ANSWER _____

- 3** Use the plant-height graph in problem 1.
How much taller is mint than thyme?

ANSWER _____

- 4** Use the plant-height graph in problem 1.
Which plant is 10 cm tall?

ANSWER _____

- 5** Use the plant-height graph in problem 1.
What is the total height of all the plants?

ANSWER _____

- 6** Use the plant-height graph in problem 1.
Basil and sage together are how much taller than thyme?

ANSWER _____

APPLY IT Show your work

- 1** At a skateboard club, this graph shows laps completed. Laps Completed Key: each # = 2 laps Mia ##### Noah ##### Ava ##### How many laps did all the friends complete altogether?

WORK SPACE

ANSWER _____

- 2** The library game club starts at 1:25 p.m. and ends at 2:50 p.m. How long does the club meet?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A robotics scoreboard shows points earned so far. Robotics Points Key: each # = 2 points Comets ##### Rockets ##### Stars ##### The Comets earn 8 more points. Will the Comets have more points than every other team? Explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Use this plant-height graph. Plant Heights Key: each # = 2 cm Basil ##### Mint ##### Thyme ##### Sage ##### How tall is the basil plant?	14 cm
2	Use the plant-height graph in problem 1. Which plant is the tallest?	Mint
3	Use the plant-height graph in problem 1. How much taller is mint than thyme?	8 cm
4	Use the plant-height graph in problem 1. Which plant is 10 cm tall?	Thyme
5	Use the plant-height graph in problem 1. What is the total height of all the plants?	58 cm
6	Use the plant-height graph in problem 1. Basil and sage together are how much taller than thyme?	20 cm

PART 2 • APPLY IT

- 38 laps** Mia completed 12 laps, Noah completed 16 laps, and Ava completed 10 laps. Add $12 + 16 + 10$ to get 38 laps.
- 1 hour 25 minutes** From 1:25 p.m. to 2:25 p.m. is 1 hour. From 2:25 p.m. to 2:50 p.m. is 25 minutes.

CHALLENGE

Yes. The Comets would have 24 points. That is 6 more points than the Rockets and 12 more points than the Stars.

Accept measurement answers with correct units. For the challenge, accept any explanation that shows the Comets reach 24 points and compares 24 with both other team totals.