

Pattern Power

Use calculations to compare changing amounts.

GRADE 4 • TEKS 4.2.C

4.2.C "use mathematical calculations to compare patterns and relationships; and"

NAME _____

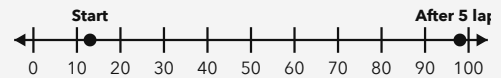
DATE _____

COMPARE PATTERNS

Find how much each pattern changes in the same amount of time. Then subtract the totals to find how much more or less one pattern has.

WORKED EXAMPLE

A robot starts 13 cm from a marker. It travels 17 cm each lap. How far from the marker is it after 5 laps?



1. Find lap distance: $17 \times 5 = 85$ cm.

2. Add the start: $13 + 85 = 98$ cm.

Answer: 98 cm

PRACTICE 4 problems

- 1 Plant A grows 6 cm each week. Plant B grows 9 cm each week. How much more does Plant B grow in 7 weeks?

ANSWER _____

- 2 A sensor records this pattern: 8, 16, 24, _____. What number comes next?

ANSWER _____

- 3 A snail moves 11 cm each minute. A beetle moves 7 cm each minute. How much farther does the snail move in 6 minutes?

ANSWER _____

- 4 One bird feeder gets 12 visits each day. Another gets 15 visits each day. How many more visits does the second feeder get in 8 days?

ANSWER _____

APPLY IT Show your work

- 1** The table shows distances traveled by two battery packs in a robot. At 24 minutes, how much farther will Pack A travel than Pack B?

ROBOT DISTANCE TEST

Minutes	Pack A, meters	Pack B, meters
6	24	18
12	48	36
18	72	54

ANSWER _____

- 2** Ava's seedling tray has 18 seedlings, and she adds 6 each week. Ben's tray has 30 seedlings, and he adds 3 each week. After 7 weeks, whose tray has more seedlings? How many more?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Kai's science club has 28 water samples and collects 8 more each week. Rowan's club has 52 samples and collects 2 more each week. After how many weeks will the clubs have the same number of samples? Explain with calculations.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Plant A grows 6 cm each week. Plant B grows 9 cm each week. How much more does Plant B grow in 7 weeks?	21 cm
2	A sensor records this pattern: 8, 16, 24, __. What number comes next?	32
3	A snail moves 11 cm each minute. A beetle moves 7 cm each minute. How much farther does the snail move in 6 minutes?	24 cm
4	One bird feeder gets 12 visits each day. Another gets 15 visits each day. How many more visits does the second feeder get in 8 days?	24 visits

PART 2 • APPLY IT

1. **24 meters farther** In 24 minutes, Pack A travels 96 meters and Pack B travels 72 meters. Subtract 72 from 96.
2. **Ava's tray has 9 more seedlings.** Ava has $18 + 42 = 60$ seedlings. Ben has $30 + 21 = 51$ seedlings, so Ava has 9 more.

CHALLENGE

After 4 weeks, both clubs have 60 samples. $28 + (8 \times 4) = 60$ and $52 + (2 \times 4) = 60$.

Accept correct equations that compare equal time periods. Require units for measurement, visits, and distance answers.