CASE · 12 MONTHS C-01

Ice cream and lake rescues

At the lake, the months with more ice cream sold were also the months with more kids pulled out of the water. Chart 1: the lines moved the same way in 9 of 11 steps.

Find Chart 1. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 WEEKS C-02

Practice and wins

The soccer team practiced a lot some weeks and hardly at all in other weeks. It won more games in some weeks than in other weeks. Chart 2: the lines moved the same way in 9 of 11 steps.

Find Chart 2. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 WEEKS C-03

Blue cars and read-aloud pages

One kid counted the blue cars on Oak Street every week. Our class also kept track of the pages we read aloud. Chart 3: the lines moved the same way in 10 of 11 steps.

Find Chart 3. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 WEEKS C-04

Umbrellas and muddy shoes

The shop sold more umbrellas in the weeks when more kids tracked mud into school. Chart 4: the lines moved the same way in 9 of 11 steps.

Find Chart 4. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 MONTHS C-05

Tutoring and tough quizzes

In the months when more kids booked tutoring, more kids struggled on the math quiz. Chart 5: the lines moved the same way in 8 of 11 steps.

Find Chart 5. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 MONTHS C-06

Cocoa mugs and snow shovels

A shop sold lots of cocoa mugs in the same months it sold lots of snow shovels. Chart 6: the lines moved the same way in 9 of 11 steps.

Find Chart 6. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 WEEKS C-07

Water and sunflowers

A class gave its sunflowers more water in some weeks than in other weeks, and measured how much they grew each week. Chart 7: the lines moved the same way in 8 of 11 steps.

Find Chart 7. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 MONTHS C-08

Block towers and bananas

Every month my little brother built a block tower. Every month I wrote down the price of bananas. Chart 8: the lines moved the same way in 8 of 11 steps.

Find Chart 8. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 MONTHS C-09

Snowplows and snow

In the months with more snowplows out, there were more inches of snow on the ground. Chart 9: the lines moved the same way in 8 of 11 steps.

Find Chart 9. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 MONTHS

C-10

Bike helmets and scraped knees

More bike helmets were sold in the same months that more kids visited the nurse with scraped knees. Chart 10: the lines moved the same way in 8 of 11 steps.

Find Chart 10. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 WEEKS

C-11

Studying and spelling

A class tracked how long kids studied spelling each week, and the class score on each quiz. Chart 11: the lines moved the same way in 9 of 11 steps.

Find Chart 11. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

CASE · 12 WEEKS

C-12

Cold medicine and missed school

More cold medicine was bought in the weeks when more kids stayed home from school. Chart 12: the lines moved the same way in 9 of 11 steps.

Find Chart 12. On 3-2-1 show 1, 2, 3 or 4 fingers. Sure coin on your mat first.

Hi, Bot

REVEAL · CASE 1 R-01

Hidden third thing

Hot weather sends more people to the snack stand AND more people into the water. More swimmers means more rescues, whatever they ate.

Hot weather was highest in Jun, Jul, Aug. So were both charts.

Hi, Bot

REVEAL · CASE 2 R-02

A causes B

Practice really does make a team better. Look at the timing: the wins showed up a week AFTER the extra practice. A cause comes before its effect.

Who moved first? A. B repeated A's moves a step later in 10 of 10.

Hi, Bot

REVEAL · CASE 3 R-03

Luck

Blue cars have nothing to do with story time. With only twelve points, two wiggly lines line up by pure luck more often than you'd think.

Nobody led: A led B 5 of 10, B led A 7 of 10.

Hi, Bot

REVEAL · CASE 4 R-04

Hidden third thing

Rain is behind both. A wet week means more umbrellas AND more mud. Stop selling umbrellas and the mud would not change.

Rainy weeks was highest in W1, W11, W12. So were both charts.

Hi, Bot

REVEAL · CASE 5 R-05

B causes A

It runs backwards. When more kids struggle, more families book tutoring. The struggle moved first and the tutoring followed it.

Who moved first? B. A repeated B's moves a step later in 10 of 10.

Hi, Bot

REVEAL · CASE 6 R-06

Hidden third thing

Freezing weather is behind both. When it snows, people want cocoa AND shovels. Neither one pushes the other.

Cold, snowy weather was highest in Jan, Feb, Dec. So were both charts.

Hi, Bot

REVEAL · CASE 7 R-07

A causes B

Water really does help plants grow. The growth showed up a week AFTER the extra watering, so the water moved first.

Who moved first? A. B repeated A's moves a step later in 10 of 10.

Hi, Bot

REVEAL · CASE 8 R-08

Luck

Block towers and bananas are unrelated. Nobody moved first and nothing hides behind both. The lines matched by luck.

Nobody led: A led B 7 of 10, B led A 7 of 10.

Hi, Bot

REVEAL · CASE 9 R-09

B causes A

Snow comes first, then the city sends out the plows. The snow moved first. Plows don't make snow.

Who moved first? B. A repeated B's moves a step later in 10 of 10.

Hi, Bot

REVEAL · CASE 10 R-10

Hidden third thing

Bike season is behind both. Sunny months mean more riders, so more helmets AND more tumbles. Helmets protect heads; they don't scrape knees.

Bike season was highest in Jun, Jul, Aug. So were both charts.

Hi, Bot

REVEAL · CASE 11 R-11

A causes B

Studying really does help. Scores rose the week AFTER the extra studying. Time order is a clue to a real cause.

Who moved first? A. B repeated A's moves a step later in 10 of 10.

Hi, Bot

REVEAL · CASE 12 R-12

Hidden third thing

A flu going around is behind both. Sick kids stay home AND parents buy medicine. The medicine isn't making anyone miss school.

A flu going around was highest in W5, W6, W7. So were both charts.

Hi, Bot