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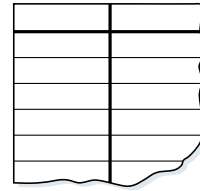
Patterns in T-Charts

You will need

- craft sticks



- t-charts

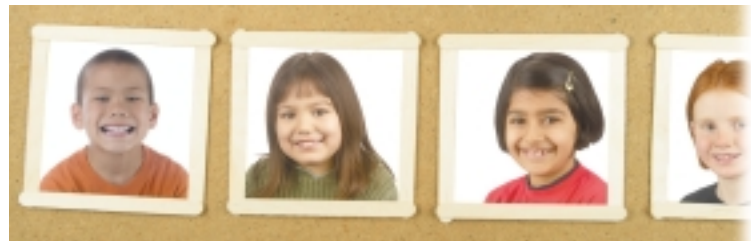


Goal

Use a t-chart to represent and extend growing patterns.

Jack makes square picture frames using craft sticks. He has 30 sticks. He predicts that 7 frames can fit across the bulletin board.

? Does Jack have enough sticks for 7 frames?



Jack's Frames

I made a **t-chart** to solve the problem. One column shows the number of frames. The other column shows the number of sticks.

After making 4 frames, I found a pattern in the t-chart:

4, 8, 12, 16, ...

The pattern starts at 4 and adds 4 each time.

I extended the pattern to complete the t-chart.

I need 28 sticks for 7 frames. I have enough.

Number of frames	Number of sticks
1	4
2	8
3	12
4	16
5	20
6	24
7	28

1 frame uses 4 sticks.

2 frames use 8 sticks.

t-chart

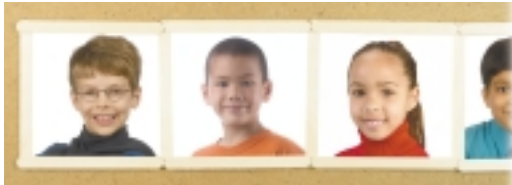
A way to organize information in a chart with 2 columns

Reflecting

1. What is the pattern rule for the number of sticks?
2. Explain how the t-chart helped Jack to solve the problem.
3. Describe how you would use the t-chart to find the number of sticks needed for 5 frames.

Checking

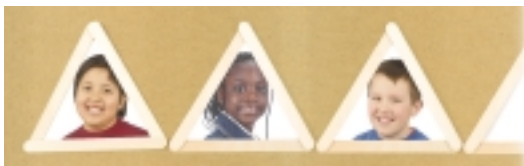
4. Brady wants to make 10 square frames.
 - a) How many sticks does she need?
Use a t-chart.
 - b) What is the pattern rule?
Explain how you know.



Number of frames	Number of sticks
1	4
2	
3	
4	

Practising

5. Jessica wants to make 7 triangle frames.
 - a) How many sticks does she need?
 - b) What is the pattern rule?
Explain how you know.



Number of frames	Number of sticks
1	3
2	
3	
4	

6. Rashad's pattern has frames that share sides.
 - a) How many sticks are needed for 10 frames? Use a t-chart.
 - b) What is the pattern rule?
Explain how you know.

