

Pattern Quest

Line Master 1 (Assessment Master)

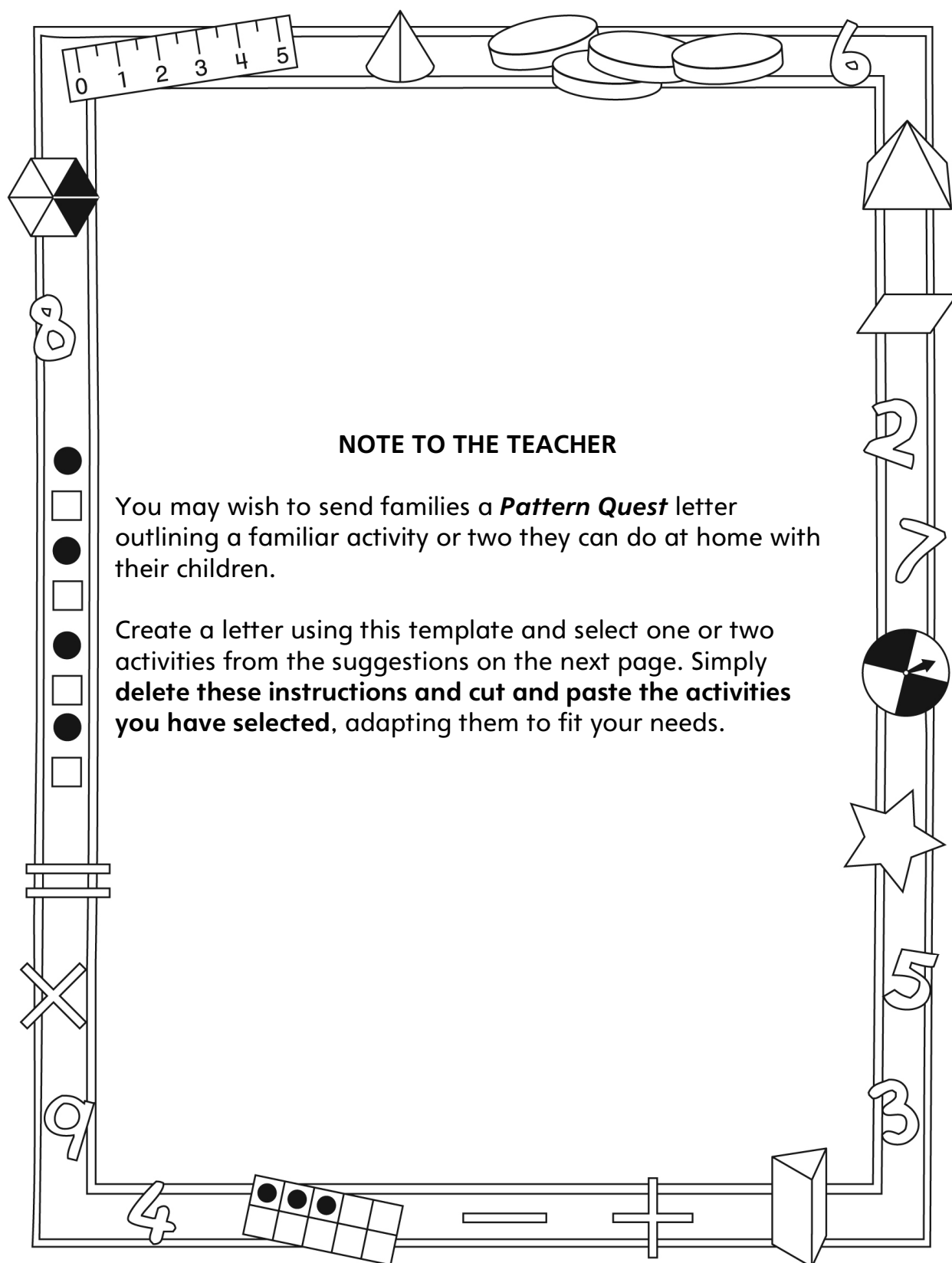
Name: _____

Investigate Repeating Patterns	Not observed	Sometimes	Consistently
Compares repeating patterns and describes how they are alike			
Recognizes, extends, and creates repeating patterns based on two or more attributes			
Identifies the core of patterns			
Investigate Growing and Shrinking Patterns			
Identifies, reproduces, and extends increasing/decreasing patterns using repeated addition or subtraction			
Creates an increasing/decreasing pattern and explains the pattern rule			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



Connecting Home and School

Line Master 2–2

Dear Family:

We have been working on ***Pattern Quest***, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Patterns can be described mathematically.” Particular focus is placed on investigating repeating patterns, growing patterns, and shrinking patterns. Try this activity at home with your child.



Reading the Story: As you read the story together, encourage your child to identify and describe the patterns. Together, compare the patterns throughout the story. Invite your child to identify the different types of patterns: repeating, growing, and shrinking. For repeating patterns, work with your child to find the part that repeats (pattern core).



Pattern Detectives: Challenge your child to find patterns at home or on the way to school. Invite her/him to explain why the designs or sequences are patterns and to record the part of the pattern that repeats (pattern core) or the pattern rule.



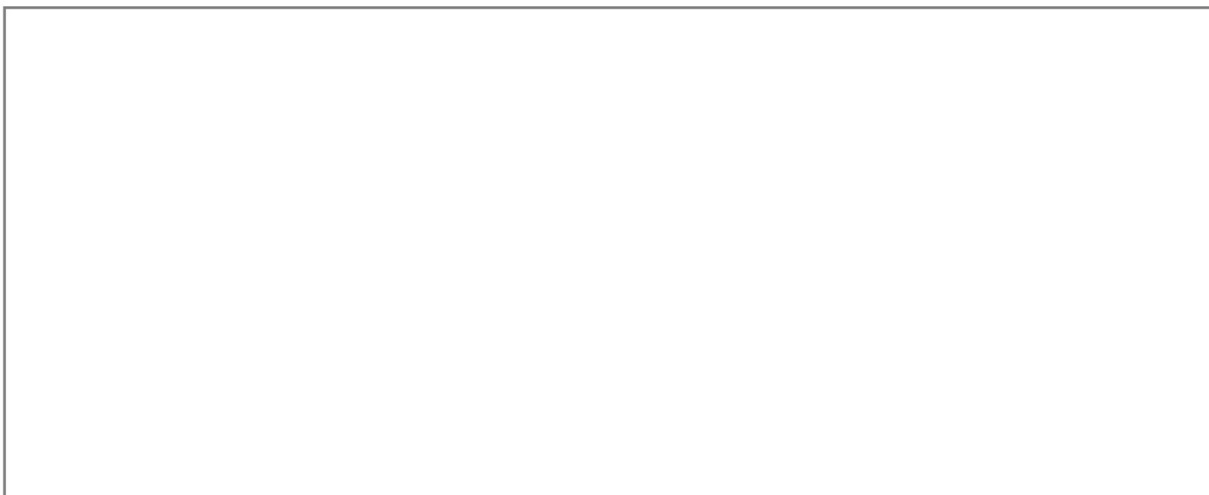
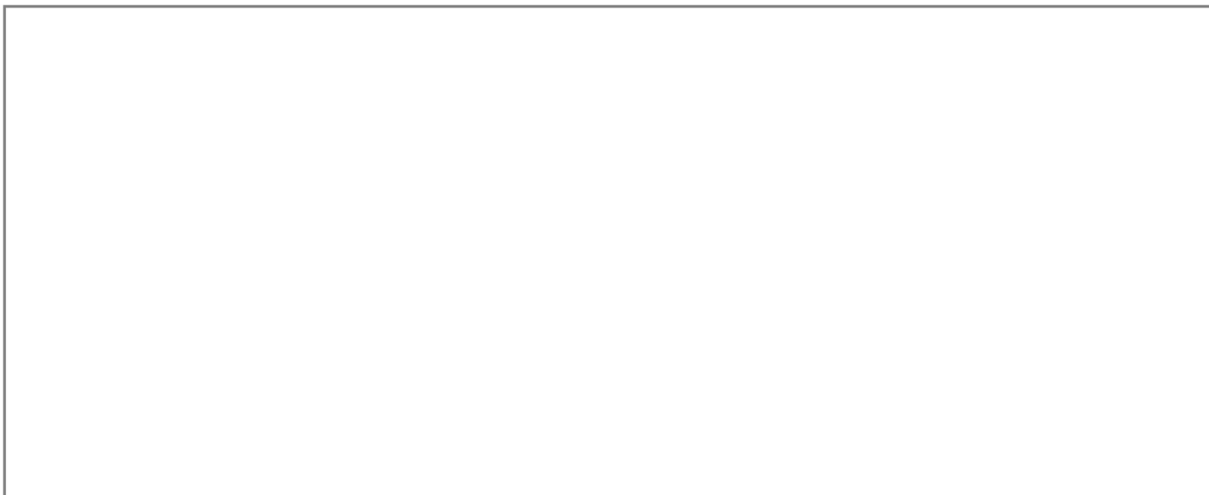
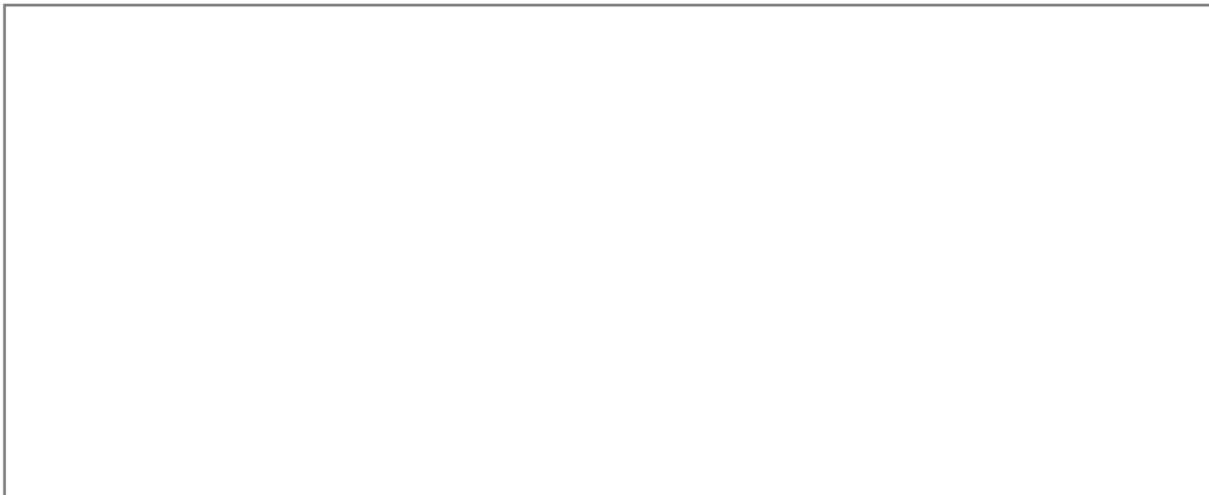
Repeating Patterns: What Comes Next? Use a minimum of 2 different attributes (e.g., shape, colour, size) to create a pattern core. Make sure the pattern core appears at least 3 times to form a repeating pattern. Invite your child to extend the pattern. Patterns can be drawn, created with concrete objects, clapped, or said aloud.



Growing/Shrinking Patterns: What Comes Next? Start a pattern using numbers that increase or decrease by the same amount each time, (e.g., 2, 4, 6 or 10, 20, 30). Invite your child to extend the pattern and identify the pattern rule. Challenge your child to start a growing or shrinking number pattern for you to extend.



Sincerely,



Pattern Attributes

Line Master 4

shape	colour
size	direction
shape	colour
size	direction

Numeral Cards

Line Master 5-1

5	10	15
20	25	30
35	40	45
50		

Numeral Cards

Line Master 5-2

55	60	65
70	75	80
85	90	95
100		

Hundred Chart

Line Master 6

Name: _____

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Comparing Patterns

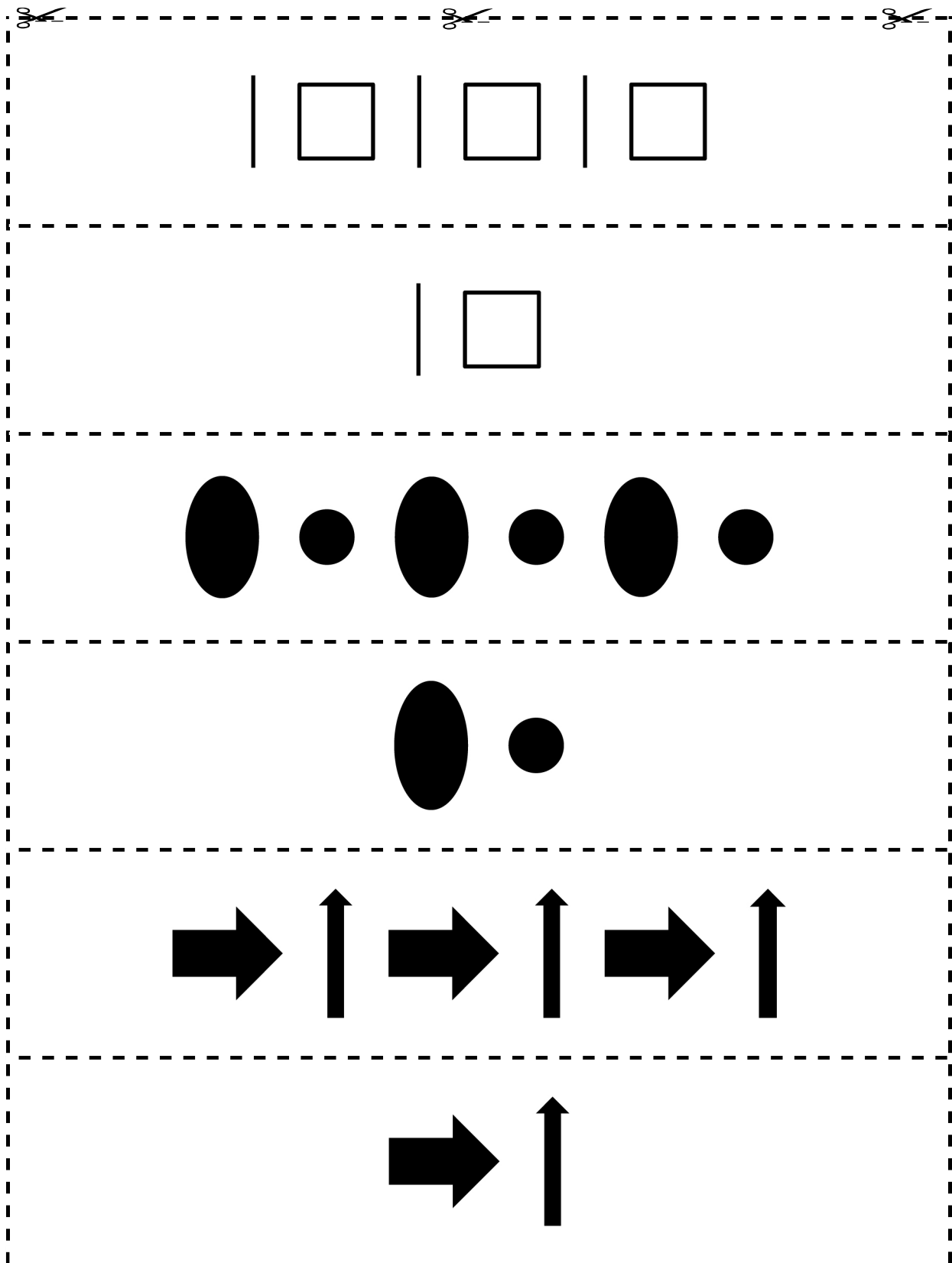
Line Master 7




Name: _____

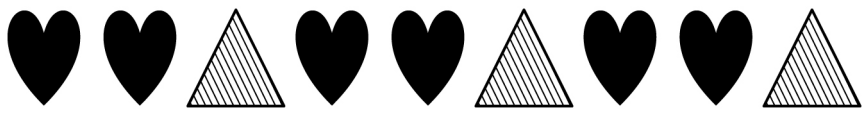
What is the same about our patterns?	What is different about our patterns?


Pattern Cards


Line Master 8-1




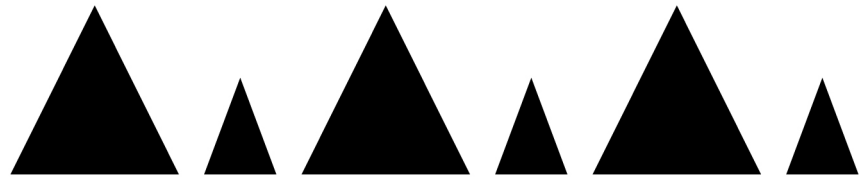






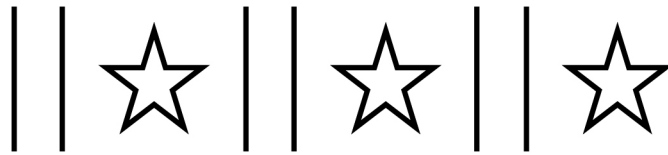




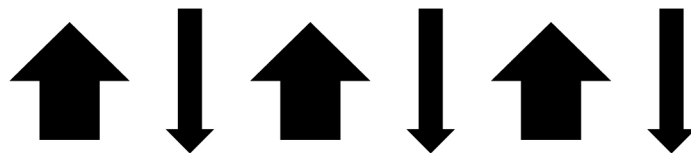




big triangle, small triangle



black line, black line, white star



wide arrow up, thin arrow down



big square, big square, small circle



black plus sign, white minus sign

2, 4, 6, 8, 10

add 2 each time

1, 2, 4, 8, 16

double the previous number each time



10, 20, 30, 40, 50

add 10 each time

100, 90, 80, 70, 60

subtract 10 each time

50, 45, 40, 35, 30

subtract 5 each time

Pattern Detectives

Line Master 9

Name: _____

Pattern	Location	Pattern Core

Classroom Pattern Quest

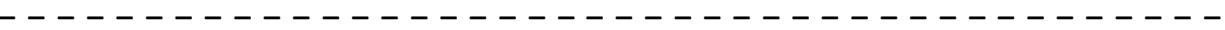
Line Master 10

Name: _____

My pattern is: _____

Pattern Problems

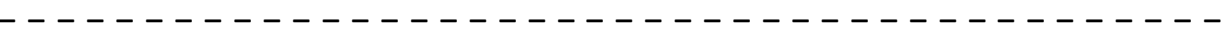
Line Master 11-1



Extend the pattern.

2, 4, 6, _____, _____, _____, _____, _____, _____

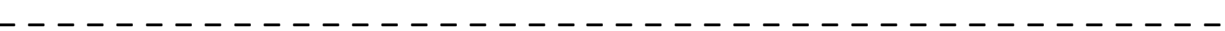
What is the pattern rule?



Extend the pattern.

25, 50, 75, _____, _____, _____, _____, _____

What is the pattern rule?



Pattern Problems

Line Master 11-2



Extend the pattern.

100, 90, 80, _____, _____, _____, _____, _____, _____, _____

What is the pattern rule?



Extend the pattern.

50, 45, 40, _____, _____, _____, _____, _____, _____, _____

What is the pattern rule?



Pattern Problems

Line Master 11–3



10, 20, 30, _____, _____

Which numbers extend the pattern?

- a) 35, 40
- b) 40, 50
- c) 50, 100

What is the pattern rule?



25, 20, 15, _____, _____

Which numbers extend the pattern?

- a) 10, 5
- b) 20, 25
- c) 14, 12

What is the pattern rule?