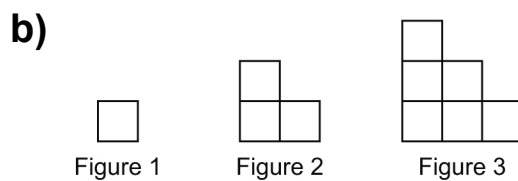
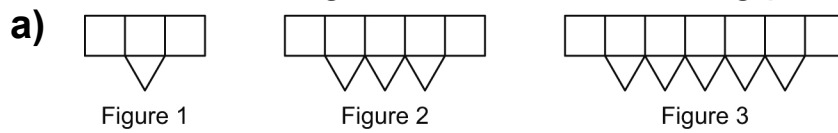


## Lesson 1: Exploring Increasing Patterns

1. Look at the patterns below.  
Draw the next 2 figures in each increasing pattern.



2. Write the pattern rule for each pattern in question 1.

a) \_\_\_\_\_

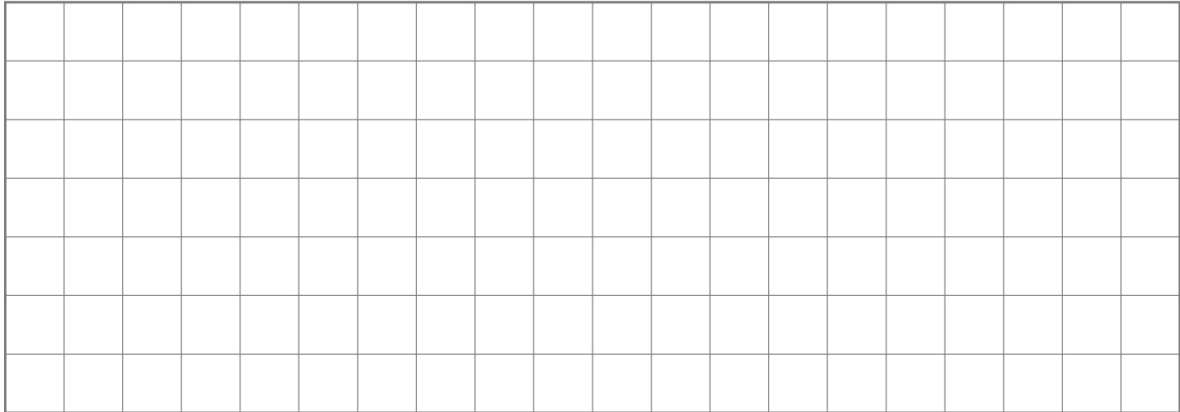
\_\_\_\_\_

b) \_\_\_\_\_

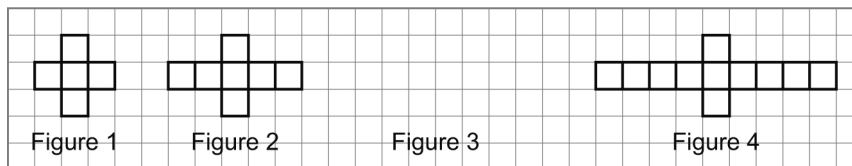
\_\_\_\_\_

## Lesson 2: Creating Increasing Patterns

1. Start with 4 squares. Add 3 squares each time.  
Draw the first 3 figures of this pattern on the grid paper below.



2. Figure 3 is missing in this increasing pattern.



Sketch what it should be.  
Explain how you know.

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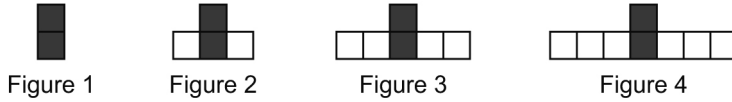
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## Lesson 3: Comparing Increasing Patterns

1. Look at this pattern.



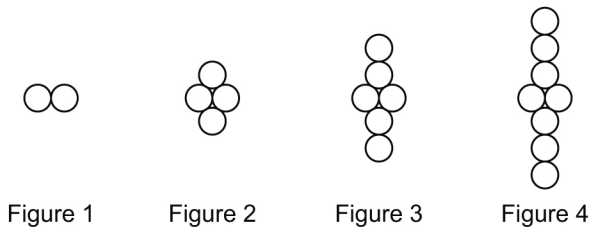
a) Write the pattern rule.

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b) Draw a different pattern that uses the same pattern rule.

2. Here is an increasing pattern.



Draw a pattern that uses:

a) the same starting point but grows by a different amount

b) a different starting point but grows by the same amount

## Lesson 4: Increasing Number Patterns

1. Fill in the missing numbers. Write the pattern rule.

a) 17, 27, 37, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

---

b) 48, 50, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 58, \_\_\_\_\_

Rule: \_\_\_\_\_

---

2. Write the first 6 numbers in each pattern.

a) Start at 28. Add 10 each time.

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

b) Start at 35. Add 5 each time.

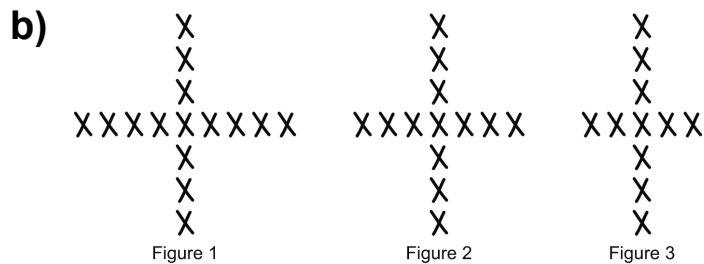
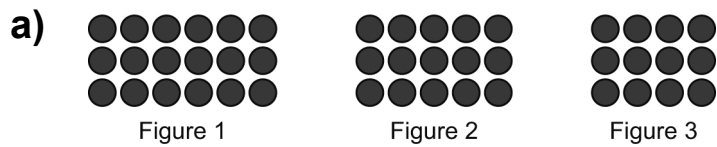
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3. Use numbers and words to describe this pattern.

61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

## Lesson 6: Exploring Decreasing Patterns

1. Draw the next 2 figures in each decreasing pattern.



2. Write the pattern rule for each pattern in question 1.

a) \_\_\_\_\_

\_\_\_\_\_

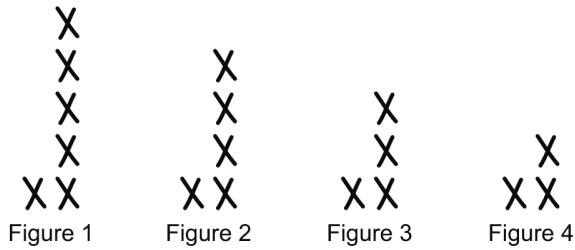
b) \_\_\_\_\_

\_\_\_\_\_

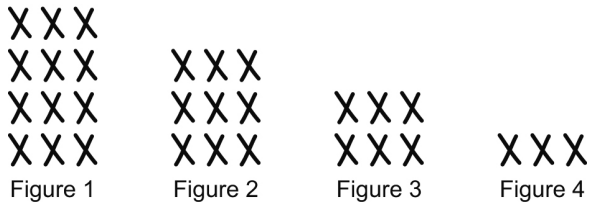
# Lesson 7: Creating and Comparing Decreasing Patterns

1. Here are 2 patterns.

## Pattern A



## Pattern B



a) Tell the pattern rule for each pattern.

Pattern A Rule: \_\_\_\_\_

\_\_\_\_\_

Pattern B Rule: \_\_\_\_\_

\_\_\_\_\_

b) How are the patterns the same? How are they different?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Lesson 8: Decreasing Number Patterns

1. Copy each pattern. Write the pattern rule.  
Fill in the missing numbers.

a) 85, 75, 65, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

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b) 78, 76, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 68, \_\_\_\_\_

Rule: \_\_\_\_\_

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2. Write the first 5 numbers in each pattern.

a) Start at 66. Count back by 3s each time.

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

b) Start at 75. Count back by 5s each time.

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3. Use numbers and words to describe this pattern.

80	79	78	77	76	75	74	73	72	71
70	69	68	67	66	65	64	63	62	61