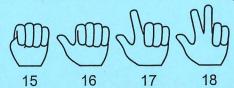
PA5-1 Increasing and Decreasing Sequences

Find the difference between 15 and 18 by counting on your fingers.



When you say "18," you have 3 fingers up. So the difference between 15 and 18 is 3.

- 1. Find the difference between the numbers. Write your answer in the circle.
 - a) 2 +3 5

Say:

- b) 7 0 9
- c) 15 19
- d) 12 16

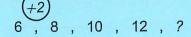
- e) 21 26
- f) 17 21
- g) 22 29
- h) 37 44

BONUS >

- i) 72 75
- j) 87 93
- k) 109 112
- 1) 116 125

Sam wants to continue the sequence:

He finds the difference between the first two numbers.



The difference between any number and the next is 2. The sequence is made by adding 2 each time.

Sam adds 2 to the last number in the sequence.

2. Find the difference between the numbers. Then extend the sequence.









o) 3 , 13 , 23 , ___ , __ , ___ , ___

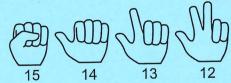


g) 50 , 53 , 56 , ____ , ___ , ___



3. A plant is 15 cm tall. It grows 2 cm each week. How tall will the plant be after 3 weeks?

Find the difference between 15 and 12 by counting backwards.



When you say "12," you have 3 fingers up. So the difference between 15 and 12 is 3.

- 4. Find the difference between the numbers. Write your answer in the circle.
 - a) 12 (-3) 9

Say:

- b) 17 13
- c) 15 9
- d) 12 8

- e) 21 0 16
- $_{\rm f)} 37 \bigcirc_{31}$
- $g) 52 \bigcirc_{49}$
- h) 64 57

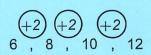
Jasmin wants to continue the sequence:

She finds the difference between the numbers in the sequence. The sequence was made by subtracting 2 each time.

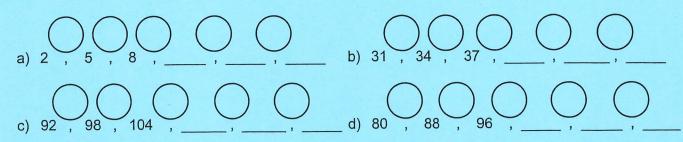
She subtracts 2 from the last number in the sequence.

- 5. Extend the sequence by subtracting the same number each time. 20 b) 32, 26 a) 18 , 15 , 12 d) 34 30 42 47 80 76 46 41 e) 51 89 81 51 57
- **6.** To solve the problem, write a sequence made by subtracting the same number.
 - a) Alex has saved \$49. He spends \$8 each day. How much money does he have left after 5 days?
 - b) Jennifer has a roll of 74 stamps. She uses 7 each day for 4 days. How many are left?

In an **increasing sequence**, each number is greater than the one before it. The sequence 6, 8, 10, 12 is an increasing sequence, and you need to **add** 2 to each number to get the next number.



7. Extend the increasing sequence. Start by finding the difference between the numbers.

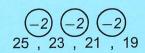


8. A plant that is 17 cm tall grows 2 cm each day. Use an increasing sequence to solve the problem.

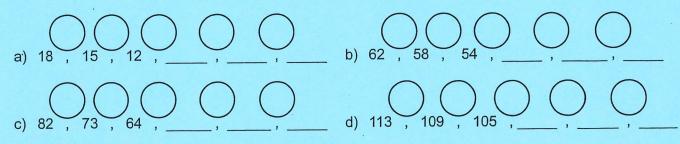
a) How tall will the plant be after 3 days? _____

b) In how many days will the plant be 27 cm tall?

In a **decreasing sequence**, each number is less than the one before it. The sequence 25, 23, 21, 19 is a decreasing sequence, and you need to **subtract** 2 from each number to get the next number.



9. Extend the decreasing sequence.



10. Use a decreasing sequence to solve the problem.

a) Lela has \$49. She spends \$8 each day.How much money does she have left after 5 days?

b) Ivan has a roll of 74 stamps. He uses 7 stamps each day for 4 days. How many stamps are left?



