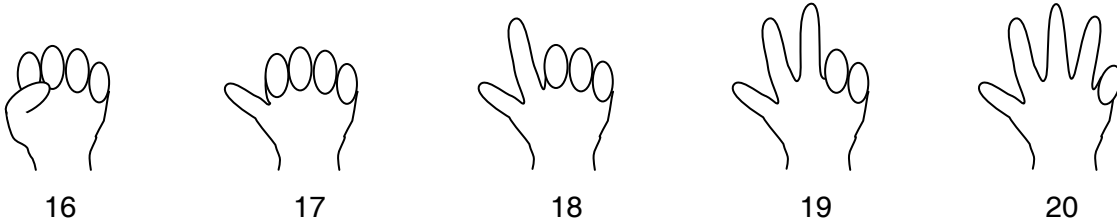


# PA4-2: Preparation for Increasing Sequences

What number is 4 **more** than 16? (Or: What is  $16 + 4$ ?)

Alissa finds the answer by counting on her fingers. She says 16 with her fist closed, then counts up from 16 until she has raised 4 fingers.



The number 20 is 4 **more** than 16.

1. Add the number in the circle to the number beside it. Write your answer in the blank.

- |       |     |       |       |     |       |       |     |       |       |     |       |
|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|
| a) 5  | (4) | _____ | b) 8  | (2) | _____ | c) 7  | (3) | _____ | d) 3  | (4) | _____ |
| e) 17 | (5) | _____ | f) 18 | (4) | _____ | g) 14 | (8) | _____ | h) 19 | (6) | _____ |
| i) 30 | (8) | _____ | j) 27 | (9) | _____ | k) 34 | (7) | _____ | l) 32 | (5) | _____ |

BONUS:

- |       |     |       |       |     |       |       |     |       |       |     |       |
|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|
| m) 67 | (2) | _____ | n) 85 | (5) | _____ | o) 42 | (3) | _____ | p) 68 | (4) | _____ |
| q) 54 | (6) | _____ | r) 63 | (5) | _____ | s) 98 | (4) | _____ | t) 93 | (8) | _____ |

2. Fill in the missing numbers.

- |                            |                            |                            |
|----------------------------|----------------------------|----------------------------|
| a) _____ is 4 more than 6  | b) _____ is 6 more than 5  | c) _____ is 5 more than 7  |
| d) _____ is 1 more than 19 | e) _____ is 6 more than 34 | f) _____ is 5 more than 18 |
| g) _____ is 8 more than 29 | h) _____ is 7 more than 24 | i) _____ is 8 more than 37 |

**PA4-3: Increasing Sequences**

Angel wants to continue the number pattern: 6 , 8 , 10 , 12 , ?

Step 1: She finds the **difference** between the first two numbers.

$\begin{array}{cccc} \textcircled{2} & \textcircled{\phantom{2}} & \textcircled{\phantom{2}} & \textcircled{\phantom{2}} \\ 6, & 8, & 10, & 12, & ? \end{array}$

Step 2: She checks that the difference between the other numbers in the pattern is also 2.

$\begin{array}{cccc} \textcircled{2} & \textcircled{2} & \textcircled{2} & \textcircled{2} \\ 6, & 8, & 10, & 12, & ? \end{array}$

Step 3: To continue the pattern, Angel adds 2 to the last number in the sequence.

6 , 8 , 10 , 12 , 14

1. Extend the following patterns. Start by finding the gap between the numbers.

a) 1  $\textcircled{\phantom{0}}$  , 3  $\textcircled{\phantom{0}}$  , 5  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$

b) 0  $\textcircled{\phantom{0}}$  , 2  $\textcircled{\phantom{0}}$  , 4  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$

c) 3  $\textcircled{\phantom{0}}$  , 7  $\textcircled{\phantom{0}}$  , 11  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$

d) 2  $\textcircled{\phantom{0}}$  , 6  $\textcircled{\phantom{0}}$  , 10  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$

e) 1  $\textcircled{\phantom{0}}$  , 4  $\textcircled{\phantom{0}}$  , 7  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$

f) 5  $\textcircled{\phantom{0}}$  , 9  $\textcircled{\phantom{0}}$  , 13  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$

BONUS:

g) 1  $\textcircled{\phantom{0}}$  , 11  $\textcircled{\phantom{0}}$  , 21  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$

h) 5  $\textcircled{\phantom{0}}$  , 12  $\textcircled{\phantom{0}}$  , 19  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$

i) 21  $\textcircled{\phantom{0}}$  , 24  $\textcircled{\phantom{0}}$  , 27  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$

j) 86  $\textcircled{\phantom{0}}$  , 88  $\textcircled{\phantom{0}}$  , 90  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$  ,  $\textcircled{\phantom{0}}$



**Use increasing sequences to solve these problems.**

2. Mary reads 5 pages of her book each night. Last night she was on page 72.

What page will she reach tonight? \_\_\_\_\_ And tomorrow night? \_\_\_\_\_

3. Jane runs 12 blocks on Monday. Each day she runs 4 blocks further than the day before.

How far does she run on Tuesday? \_\_\_\_\_ And on Wednesday? \_\_\_\_\_

On what day of the week will she run 28 blocks? \_\_\_\_\_