



# Preview – Information



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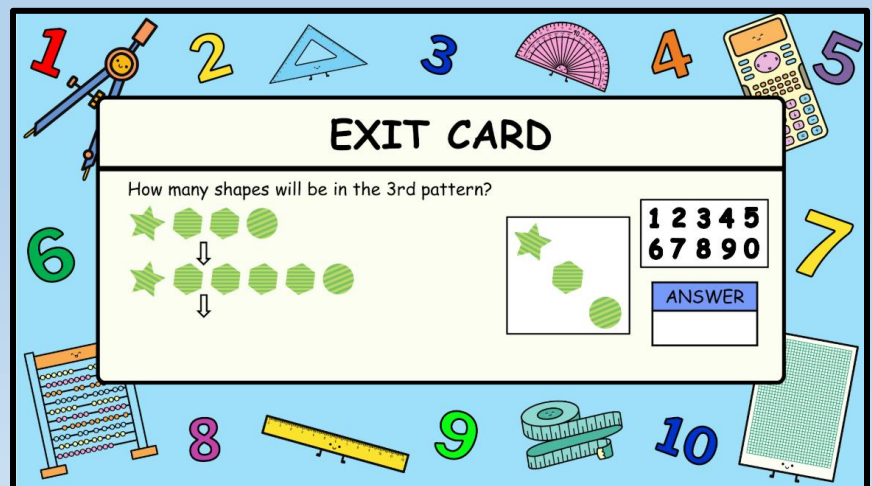
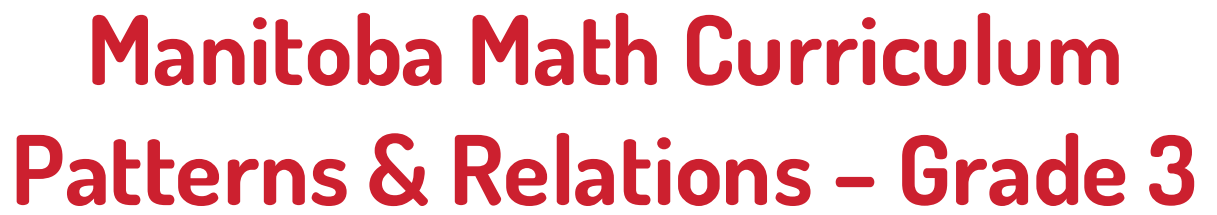
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# Google Slides Lessons Preview







# Manitoba Math Curriculum

## Patterns & Relations – Grade 3

### Decreasing Patterns - Emojis

Drag the shapes to fill the missing line of the decreasing pattern.

|                                              |                                              |                                           |
|----------------------------------------------|----------------------------------------------|-------------------------------------------|
| 1) Draw the missing line in the pattern.<br> | 2) Draw the missing line in the pattern.<br> | 3) Draw the next line in the pattern.<br> |
| 4) Draw the next line in the pattern.<br>    | 5) Draw the next line in the pattern.<br>    | 6) Draw the next line in the pattern.<br> |

Drag the numbers to determine the pattern rule and fill in the blanks in the growing pattern.

1 2 3 4 5 6 7 8 9 0 +

|                                    |                                       |
|------------------------------------|---------------------------------------|
| 1) 21, 25, 29, _____, _____, _____ | 2) 34, 40, 46, _____, _____, _____    |
| 3) 55, 65, 75, _____, _____, _____ | 4) 100, 200, 300, _____, _____, _____ |
| 5) 47, 55, 63, _____, _____, _____ | 6) 33, 63, 93, _____, _____, _____    |

### Shrinking/Decreasing Patterns

Drag the numbers to determine the pattern rule and fill in the blanks in the decreasing pattern.

1 2 3 4 5 6 7 8 9 0 -

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| 1) 32, 28, 24, _____, _____, _____    | 2) 65, 55, 45, _____, _____, _____    |
| 3) 89, 86, 83, _____, _____, _____    | 4) 118, 116, 114, _____, _____, _____ |
| 5) 355, 348, 341, _____, _____, _____ | 6) 550, 548, 546, _____, _____, _____ |





# Manitoba Math Curriculum Patterns & Relations – Grade 3

**Input/Output Table - Subtraction**

Drag the numbers to fill in the tables. The first one is done for you.

1 2 3 4 5 6 7 8 9 0

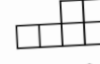
| Rule = Subtract 6 |     | Rule = Subtract 0 |     | Rule = Subtract 3 |     | Rule = Subtract 2 |     | Rule = Subtract 5 |     |
|-------------------|-----|-------------------|-----|-------------------|-----|-------------------|-----|-------------------|-----|
| In                | Out | In                | Out | In                | Out | In                | Out | In                | Out |
| 15                | 9   | 11                |     | 29                |     | 25                |     | 17                |     |
| 36                | 30  | 48                |     | 60                |     | 79                |     | 84                |     |
| 145               | 139 | 284               |     | 290               |     | 352               |     | 479               |     |
| 566               | 560 | 621               |     | 657               |     | 700               |     | 707               |     |
| 852               | 846 | 869               |     | 902               |     | 938               |     | 985               |     |

**T-Tables - Finding Block Patterns**

Drag the numbers to fill in the T-Tables by counting the blocks.

1 2 3 4 5 6 7 8 9 0

| Blocks                                                                                 | Figure | Term Value |
|----------------------------------------------------------------------------------------|--------|------------|
| 1)  | 1      |            |
|     | 2      |            |
|     | 3      |            |
|                                                                                        | 4      |            |

| Blocks                                                                                 | Figure | Term Value |
|----------------------------------------------------------------------------------------|--------|------------|
| 2)  | 1      |            |
|     | 2      |            |
|     | 3      |            |
|                                                                                        | 4      |            |

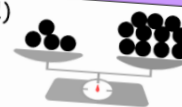
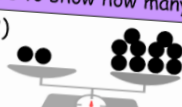
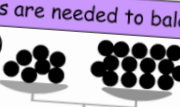
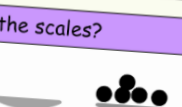
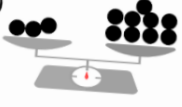
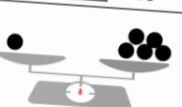
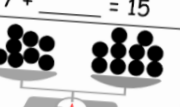
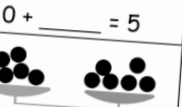
| Blocks                                                                                 | Figure | Term Value |
|----------------------------------------------------------------------------------------|--------|------------|
| 3)  | 1      |            |
|     | 2      |            |
|     | 3      |            |
|                                                                                        | 4      |            |

| Blocks                                                                                 | Figure | Term Value |
|----------------------------------------------------------------------------------------|--------|------------|
| 4)  | 1      |            |
|     | 2      |            |
|     | 3      |            |
|                                                                                        | 4      |            |

**Questions**

Drag the numbers to show how many balls are needed to balance the scales?

1 2 3 4 5 6 7 8 9 0

|                                                                                                                        |                                                                                                                        |                                                                                                                         |                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 1) <br>$4 + \underline{\quad} = 11$ | 2) <br>$2 + \underline{\quad} = 10$ | 3) <br>$7 + \underline{\quad} = 15$ | 4) <br>$0 + \underline{\quad} = 5$ |
| 5) <br>$3 + \underline{\quad} = 9$  | 6) <br>$1 + \underline{\quad} = 5$  | 7) <br>$8 + \underline{\quad} = 10$ | 8) <br>$6 + \underline{\quad} = 6$ |



# Workbook Preview



## Grade 3

### Patterns and Relations (Patterns)

| #  | General Outcome: Use patterns to describe the world and to solve problems                                                                                                                                                                                                                     | Pages That Cover the Expectations                          |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| p1 | <u>Specific Outcomes</u>                                                                                                                                                                                                                                                                      |                                                            |
|    | <div>Preview of 40 pages from this product that contains 124 pages total.</div>                                                                                                                                                                                                               |                                                            |
| p2 | Demonstrate an understanding of decreasing patterns by: <ul style="list-style-type: none"> <li>• describing</li> <li>• extending</li> <li>• comparing</li> <li>• creating</li> </ul> numerical (numbers to 1000) and non-numerical patterns using manipulatives, diagrams, sounds and actions | 15, 2, 9,<br>3 – 10, 16 – 17, 19 – 22, 24, 25, 30 – 33, 37 |

Name: \_\_\_\_\_

6

Curriculum Connection  
P1, P2

## Repeating A/B Patterns

### Questions

Label the A/B/C patterns below and then continue the pattern

1)      

A B A B A B

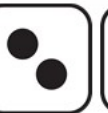
2)     

3)    

4)      

5)        

6)          

7)        



Name: \_\_\_\_\_

7

Curriculum Connection  
P1, P2

## Repeating A/B Patterns

### Part 1

Label the A/B/C patterns below and then continue the pattern



### Part 2

Create patterns that use the given A

1) \_\_\_\_\_  
A B B A B B A B B

2) \_\_\_\_\_  
A A B C A A B C A

3) \_\_\_\_\_  
A B C A A B C A A



# Creating Patterns with Squares

## Part 1

Draw the next figure in the pattern by adding one block

1) Figure 1  
Figure 4

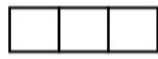


Figure 2

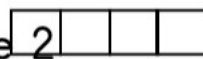


Figure 3

2) Figure 1  
Figure 4

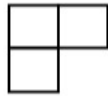


Figure 2

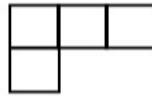


Figure 3

3) Figure 1  
Figure 4



Figure 2



Figure 3

4) Figure 1  
Figure 4



Figure 2



Figure 3

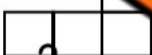
## Part 2

Draw the next figure by adding two blocks. Shade in the added blocks

1) Figure 1  
Figure 4



Figure 2



2) Figure 1  
Figure 4

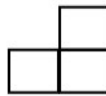


Figure 2



Figure 3

3) Figure 1  
Figure 4

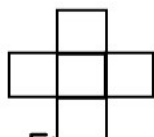


Figure 2

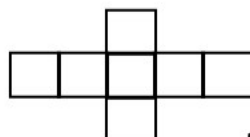
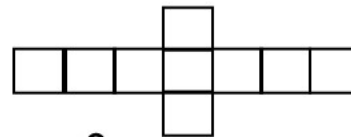


Figure 3

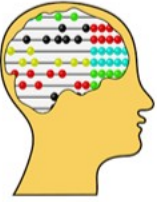


Name: \_\_\_\_\_

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Curriculum Connection  
P1

# Growing Patterns - Addition



## Growing/Increasing Patterns

+10 +10 +10 +10 +10  
 $\wedge \quad \wedge \quad \wedge \quad \wedge \quad \wedge$   
 10, 20, 30, 40, 50, 60

+5 +5 +5 +5 +5  
 $\wedge \quad \wedge \quad \wedge \quad \wedge \quad \wedge$   
 3, 8, 13, 18, 23, 28



### Part 1

### Growing Patterns - Addition

1) 2,  $\wedge$  5, \_\_\_\_\_

2) 6,  $\wedge$  10,  $\wedge$  14, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3) 10,  $\wedge$  15,  $\wedge$  20, \_\_\_\_\_,  $\wedge$  252,  $\wedge$  255, 258, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) 702,  $\wedge$  708,  $\wedge$  714, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6) \_\_\_\_\_, 84, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

### Part 2

Follow the rule by adding the next \_\_\_\_\_ in \_\_\_\_\_ pattern

1) (Add 2)

7, 9, 11, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2) (Add 3)

22, 25, 28, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3) (Add 6)

32, 38, 44, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4) (Add 5)

115, 120, 125, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) (Add 10)

604, 614, 624, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6) (Add 4)

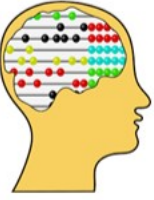
942, 946, 950, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Name: \_\_\_\_\_

16

Curriculum Connection  
P2

# Shrinking Patterns - Subtraction



## Shrinking/Decreasing Patterns

-10 -10 -10 -10 -10  
 $\wedge \wedge \wedge \wedge \wedge$   
 60, 50, 40, 30, 20, 10

-5 -5 -5 -5 -5  
 $\wedge \wedge \wedge \wedge \wedge$   
 45, 40, 35, 30, 25, 20



### Part 1

Fill in the missing numbers in the pattern

1) 12,  $\wedge$  8, \_\_\_\_\_, \_\_\_\_\_2) 23,  $\wedge$  19,  $\wedge$  15, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_3) 32,  $\wedge$  26,  $\wedge$  20, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_5) 156,  $\wedge$  148,  $\wedge$  140, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_6) \_\_\_\_\_,  $\wedge$  96, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

### Part 2

Follow the rule by adding the next \_\_\_\_\_ in \_\_\_\_\_ pattern

1) (Subtract 2)

18, 16, 14, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2) (Subtract 3)

30, 27, 24, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3) (Subtract 5)

38, 33, 28, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4) (Subtract 100)

600, 500, 400, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) (Subtract 6)

862, 856, 850, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6) (Subtract 4)

378, 374, 370, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_



Name: \_\_\_\_\_

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Curriculum Connection  
P1

## Pattern Rule - Addition

### Part 1

Continue the growing/increasing patterns below

1) 10, 20, 30, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 10, add \_\_\_\_\_ each time

2) 2, 5, 8, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ add \_\_\_\_\_ each time

3) 35, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ add \_\_\_\_\_ each time

4) 150, 160, 170, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ add \_\_\_\_\_ each time

5) 673, 677, 681, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ add \_\_\_\_\_ each time

### Part 2

Write your own pattern using a pattern rule

1) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 20, add 5 each time

2) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 110, add 7 each time

3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 27, add 5 each time

4) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 546, add 4 each time

## Pattern Rule - Subtraction

### Part 1

Continue the shrinking/decreasing patterns below

1) 12, 10, 8, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 12, subtract \_\_\_\_\_ each time

2) 22, 19, 16, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ subtract \_\_\_\_\_ each time

3) 145, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ subtract \_\_\_\_\_ each time

4) 74, 68, 62, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ subtract \_\_\_\_\_ each time

5) 133, 123, 113, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ subtract \_\_\_\_\_ each time

### Part 2

Write your own pattern using a subtraction rule

1) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 50, subtract 0 each time

2) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 236, subtract 6 each time

3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 794, subtract 5 each time

4) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 142, subtract 4 each time



Name: \_\_\_\_\_

20

Curriculum Connection  
P1, P2

## Patterns Within Number Strings (10s)

### Part 1

Continue the growing patterns below

10

1) 1, 11, 21, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2) 6, 16, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3) 9, 19, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4) 3, 13, 23, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) 202, 212, 222, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

### Part 2

Continue the shrinking patterns below

1) 94, 84, 74, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2) 97, 87, 77, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3) 92, 82, 72, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4) 999, 989, 979, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) 791, 781, 771, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

# Input/Output Table - Addition



Rule: add 5

| In | Out |
|----|-----|
| 25 | 30  |
| 45 | 50  |
| 65 | 70  |
| 85 | 90  |



Question

Fill in the input/output tables below

| In  | Out |
|-----|-----|
| 20  |     |
| 30  |     |
| 50  |     |
| 120 |     |

| <u>Rule: add 4</u> |     |
|--------------------|-----|
| In                 | Out |
| 5                  |     |
| 11                 |     |
| 22                 |     |
| 8                  |     |

| <u>Rule: add 2</u> |     |
|--------------------|-----|
| In                 | Out |
| 220                |     |
| 240                |     |
| 254                |     |
| 268                |     |

| <u>Rule: add 5</u> |     |
|--------------------|-----|
| In                 | Out |
| 325                |     |
| 350                |     |
| 375                |     |
| 400                |     |

| <u>Rule: add 6</u> |     |
|--------------------|-----|
| In                 | Out |
| 300                |     |
| 322                |     |
| 356                |     |
| 372                |     |

| <u>Rule: add 8</u> |     |
|--------------------|-----|
| In                 | Out |
| 612                |     |
| 626                |     |
| 650                |     |
| 681                |     |

Name: \_\_\_\_\_

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Curriculum Connection  
P2

# Input/Output Table - Subtraction



Rule: subtract 5

| In | Out |
|----|-----|
| 35 | 30  |
| 50 | 45  |
| 65 | 60  |
| 80 | 75  |

Question: Fill in the input/output tables below

Rule: subtract 5

| In  | Out |
|-----|-----|
| 10  |     |
| 35  |     |
| 55  |     |
| 100 |     |

Rule: subtract 3

| In | Out |
|----|-----|
| 5  |     |
| 25 |     |
| 57 |     |
| 8  |     |

Rule: subtract 2

| In | Out |
|----|-----|
| 4  |     |
| 28 |     |
| 45 |     |
| 77 |     |

Rule: subtract 5

| In  | Out |
|-----|-----|
| 146 |     |
| 162 |     |
| 185 |     |
| 197 |     |

Rule: subtract 6

| In  | Out |
|-----|-----|
| 365 |     |
| 342 |     |
| 328 |     |
| 312 |     |

Rule: subtract 4

| In  | Out |
|-----|-----|
| 646 |     |
| 628 |     |
| 614 |     |
| 608 |     |

Name: \_\_\_\_\_

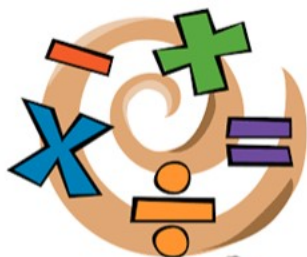
25

Curriculum Connection  
P1, P2

# Pattern Rule - Input/Output Tables

Rule: add 10

| In | Out |
|----|-----|
| 20 | 30  |
| 30 | 40  |
| 50 | 60  |
| 90 | 100 |



Question

Fill in the input/output tables below

| In | Out |
|----|-----|
| 10 |     |
| 30 |     |
| 50 |     |
| 70 |     |

| In | Out |
|----|-----|
| 3  |     |
| 12 |     |
| 27 |     |
| 7  |     |

Rule: subtract 6

| In  | Out |
|-----|-----|
| 148 |     |
| 132 |     |
| 115 |     |
| 109 |     |

Rule: subtract 4

| In  | Out |
|-----|-----|
| 222 |     |
| 214 |     |
| 208 |     |
| 204 |     |

Rule: subtract 2

| In  | Out |
|-----|-----|
| 878 |     |
| 862 |     |
|     | 825 |
|     | 815 |

Rule: add 6

| In  | Out |
|-----|-----|
| 722 |     |
| 748 |     |
|     | 766 |
|     | 792 |



# Increasing Patterns - Rules

**Questions**

Fill in the blanks by figuring out the pattern rules

22, 24, 26, 28, 30, 32, 34, 36

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

42, 48, 51, 54, 57, 60

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

58, 63, 68, 73, 78, 83, 88, 93

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

23, 33, 43, 53, 63, 73, 83, 93

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

46, 50, 54, 58, 62, 66, 70, 74

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

71, 74, 77, 80, 83, 86, 89, 92

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

# Increasing Patterns - Rules

**Questions**

Fill in the blanks by figuring out the pattern rules

104, 108, 112, 116, 120, 124

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

165, 170, 175, 180, 185

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

240, 250, 260, 270, 280, 290

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

312, 315, 318, 321, 324, 327

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

525, 535, 545, 555, 565, 575

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

804, 810, 816, 822, 828, 834

Start at \_\_\_\_\_, then add \_\_\_\_\_ each time

Name: \_\_\_\_\_  
29

# Creating Rules



## Questions

Write your own patterns using the pattern rule

1) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 143, add 2 each time

2) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 146, add 4 each time

3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 462, add 5 each time

4) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 615, add 10 each time

5) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 804, add 3 each time



# Decreasing Number Patterns - Rules

**Questions**

Fill in the blanks by figuring out the pattern rules

34, 32, 30, 28, 26, 24, 22, 20

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

44, 41, 39, 36, 33, 30, 27, 24

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

77, 73, 67, 65, 57, 53, 49

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

88, 78, 68, 58, 48, 38, 28, 18

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

95, 90, 85, 80, 75, 70, 65, 60

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

92, 85, 78, 71, 64, 57, 50, 43

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time



# Decreasing Number Patterns - Rules

**Questions**

Fill in the blanks by figuring out the pattern rules

147, 145, 143, 141, 139, 137

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

164, 160, 156, 152

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

228, 225, 222, 219, 216, 213

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

437, 432, 427, 422, 417, 412

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

636, 630, 624, 618, 612, 606

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

987, 977, 967, 957, 947, 937

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

Name: \_\_\_\_\_

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Curriculum Connection  
P.2

# Creating Rules



## Questions

Write your own patterns using the pattern rule

1) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 145, subtract 2 each time

2) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_, subtract 3 each time

3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 375, subtract 5 each time

4) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 477, subtract 4 each time

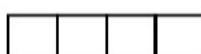
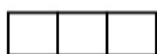
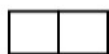
5) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 787, subtract 10 each time

# T-Tables - Finding Patterns

## Questions

Fill in the T-Tables by counting the blocks



1) Figure 1

Figure 2

Figure 3

Figure

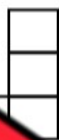
Term Value

1

2

3

4



2) Figure 1

Figure 2

Figure 3

Figure

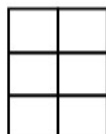
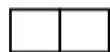
Term Value

1

2

3

4



3) Figure 1

Figure 2

Figure 3

Figure

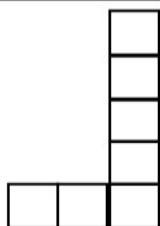
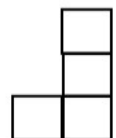
Term Value

1

2

3

4



4) Figure 1

Figure 2

Figure 3

Figure

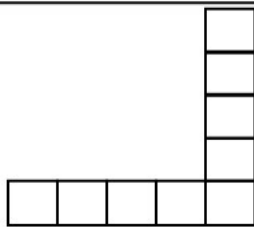
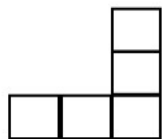
Term Value

1

2

3

4



5) Figure 1

Figure 2

Figure 3

Figure

Term Value

1

2

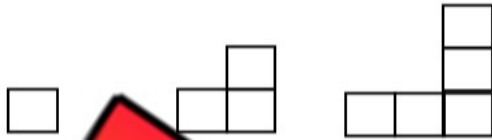
3

4

# T-Tables - Drawing Blocks

## Questions

Fill in the T-Tables and draw figure 4



1) Figure 1



Figure 2

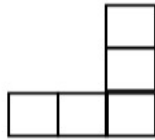
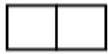


Figure 3

Figure 4

| Figure | Term Value |
|--------|------------|
| 1      |            |
| 2      |            |
| 3      |            |
| 4      |            |



2) Figure 1

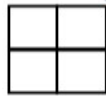


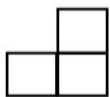
Figure 2



Figure 3

Figure 4

| Figure | Term Value |
|--------|------------|
| 1      |            |
| 2      |            |
| 3      |            |
| 4      |            |



3) Figure 1

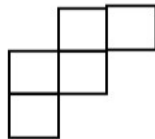


Figure 2

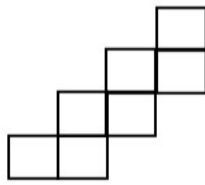


Figure 3

Figure 4

| Figure | Term Value |
|--------|------------|
| 1      |            |
| 2      |            |
| 3      |            |
| 4      |            |



4) Figure 1

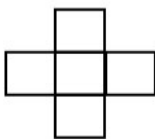


Figure 2

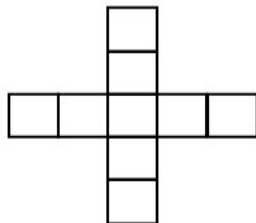


Figure 3

Figure 4

| Figure | Term Value |
|--------|------------|
| 1      |            |
| 2      |            |
| 3      |            |
| 4      |            |



# Patterning - Word Problems

## Questions

Answer the questions below

1) Jill's pool uses 2 chlorine pucks in May, 5 pucks in June, and 8 pucks in July. If the pattern continued, how many pucks would Jill use in August and November?

August: \_\_\_\_\_

November: \_\_\_\_\_



2) Henry's pizza store sells a certain number of pizzas each week. He sells 8 pizzas on Monday, 15 pizzas on Tuesday, 22 pizzas on Wednesday, and 29 pizzas on Thursday. If the pattern continues, how many pizzas will he sell on Friday?

**Bonus:** How many pizzas will he sell for the week?



3) Sam starts with 150 dollars at the start of the week. He spends 5 dollars on Monday, 10 dollars on Tuesday, 15 dollars on Wednesday, and 20 dollars on Thursday. How much money did he spend on Friday?

**Bonus:** How much money did he have left on Sunday?



Name: \_\_\_\_\_

# Algebra Quiz - Patterning

## Part 1

Continue the repeating patterns below by drawing 3 more pictures



## Part 2

Write the pattern core and continue the pattern

A B C C A C \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

A B B C D A B B C D \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

A B C B A B C B \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## Part 3

Circle the pattern core and label the pictures



## Part 4

Follow the rule by adding or subtracting to find the next number

1) (Add 5)

3, 8, 13, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2) (Add 3)

123, 126, 129, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3) (Add 6)

302, 308, 314, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4) (subtract 2)

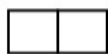
18, 16, 14, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) (subtract 4)

660, 656, 652, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6) (subtract 4)

546, 542, 538, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_



7) Figure 1



Figure 2



Figure 3

Figure 4

Figure 5

Figure 6

## Word Problem

Solve the word problem. Show your work!

If you read 1 book on Monday, 2 books on Tuesday, 3 books on Wednesday, how many books would you read on Sunday if the pattern continues?

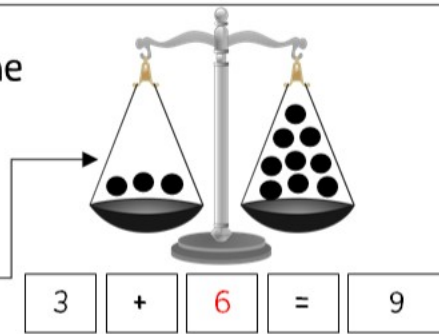
How many days would it take you to read 45 books?



# Pre-Algebra - Balancing Addition Equations

Balance the scales by putting the same amount of circles on each scale

Answer: Add 6 circles to the scale to make them equal. 

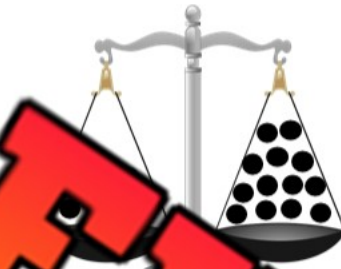


Question

How many balls do you need to add to balance the scales?



|   |   |  |   |    |
|---|---|--|---|----|
| 8 | + |  | = | 11 |
|---|---|--|---|----|



|  |   |  |   |  |
|--|---|--|---|--|
|  | + |  | = |  |
|--|---|--|---|--|



|   |   |  |   |    |
|---|---|--|---|----|
| 8 | + |  | = | 14 |
|---|---|--|---|----|



|   |   |  |   |   |
|---|---|--|---|---|
| 5 | + |  | = | 9 |
|---|---|--|---|---|



|   |   |  |   |    |
|---|---|--|---|----|
| 7 | + |  | = | 12 |
|---|---|--|---|----|



|   |   |  |   |    |
|---|---|--|---|----|
| 2 | + |  | = | 13 |
|---|---|--|---|----|



|   |   |  |   |    |
|---|---|--|---|----|
| 6 | + |  | = | 10 |
|---|---|--|---|----|



|   |   |  |   |    |
|---|---|--|---|----|
| 3 | + |  | = | 14 |
|---|---|--|---|----|



|   |   |  |   |    |
|---|---|--|---|----|
| 1 | + |  | = | 12 |
|---|---|--|---|----|



Name: \_\_\_\_\_

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Curriculum Connection  
PR.3

## Addition - Are They Equal?

Are the equations equal? Put an X through the equal sign for any equations that are not equal

$5 + 3 = 8$

$21 + 10 \neq 30$

$17 + 11 = 28$

### Questions

Put a slash ( $\neq$ ) through the equal sign if it is not balanced

1)  $15 + 10 = 25$

2)  $20 + 10 = 30$

3)  $56 + 5 = 71$

4)  $23 + 6 = 29$

5)  $27 + 13 = 40$

6)  $50 + 50 = 100$

7)  $62 + 9 = 70$

8)  $12 + 3 = 4$

9)  $58 + 7 = 65$

10)  $88 + 10 = 98$

11)  $44 + 11 = 54$

12)  $100 + 5 = 115$

13)  $153 + 4 = 157$

14)  $128 + 4 = 133$

15)  $150 + 8 = 164$

16)  $182 + 0 = 182$

17)  $110 + 10 = 120$

18)  $56 + 100 = 156$

19)  $120 + 5 = 125$

20)  $140 + 8 = 147$

21)  $2 + 168 = 170$

# Pre-Algebra - Balancing Addition Equations

Balancing equations means both sides of the equal sign must be the same.

$$\begin{array}{c} 10 \\ \wedge \\ 3 + 7 = \boxed{10} \end{array}$$

Examples:

$$\begin{array}{c} 30 \\ \wedge \\ 24 + \boxed{6} = 30 \end{array}$$

## Questions

Fill in the missing number to balance the equation

1)  $4 + \square = \square$

$\begin{array}{c} \circ \circ \\ \circ \circ \end{array}$

2)  $3 + 6 = \square$

$\begin{array}{c} \circ \\ \circ \circ \circ \\ \circ \circ \circ \circ \circ \end{array}$

3)  $4 + 5 = \square$

$\begin{array}{c} \circ \circ \\ \circ \circ \end{array} \quad \begin{array}{c} \circ \circ \circ \\ \circ \circ \circ \circ \end{array}$

4)  $1 + \square = \square$

$\begin{array}{c} \circ \\ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

5)  $\square + 4 = 10$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

6)  $4 + \square = 12$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

7)  $\square + 6 = 10$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

8)  $\square + 4 = 11$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

9)  $\square + 7 = 11$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

10)  $\square + 2 = 9$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

11)  $3 + \square = 8$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

12)  $6 + 7 = \square$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

13)  $\square + 6 = 16$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

14)  $7 + \square = 9$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

15)  $3 + 12 = \square$

$\begin{array}{c} \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \circ \end{array}$

**Pre-Algebra - Balancing Addition Equations**

Balancing equations means both sides of the equal sign must be the same.

$$\begin{array}{c} 10 \\ \wedge \\ 3 + 7 = \boxed{10} \end{array}$$

Examples:

$$\begin{array}{c} 30 \\ \wedge \\ 24 + \boxed{6} = 30 \end{array}$$

**Questions**

Fill in the missing number to balance the equation

1)  $15 + 8 = \boxed{\phantom{00}}$

2)  $23 + 6 = \boxed{\phantom{00}}$

3)  $54 + 5 = \boxed{\phantom{00}}$

4)  $1 + \boxed{\phantom{00}} = \boxed{\phantom{00}}$

$\boxed{\phantom{00}} = 15$

6)  $26 + \boxed{\phantom{00}} = 32$

$= 32$

7)  $\boxed{\phantom{00}} + 6 = 10$

8)  $\boxed{\phantom{00}} = 21$

9)  $\boxed{\phantom{00}} + 33 = 42$

10)  $35 + 13 = \boxed{\phantom{00}}$

11)  $52 + \boxed{\phantom{00}} = 61$

12)  $\boxed{\phantom{00}} + 78 = 81$

13)  $124 + \boxed{\phantom{00}} = 131$

14)  $96 + 5 = \boxed{\phantom{00}}$

15)  $184 + \boxed{\phantom{00}} = 197$

16)  $152 + \boxed{\phantom{00}} = 162$

17)  $135 + 15 = \boxed{\phantom{00}}$

18)  $113 + \boxed{\phantom{00}} = 125$

19)  $144 + \boxed{\phantom{00}} = 152$

20)  $118 + 12 = \boxed{\phantom{00}}$

21)  $151 + \boxed{\phantom{00}} = 165$



Name: \_\_\_\_\_  
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## Addition Expressions - Equal?

Are the expressions equal? Put a slash through the equal sign for any equations that are not equal

**Examples:**  $5 + 3 = 2 + 6$        $4 + 5 \neq 7 + 1$



**Questions** Put a slash ( $\neq$ ) through the equal sign if it is not balanced

1)  $21 + 11 = 11 + 17$

7)  $16 + 7 = 11 + 11$

2)  $27 + 3 = 11 + 24$

8)  $26 + 5 = 24 + 7$

3)  $38 + 10 = 42 + 7$

9)  $15 = 62 + 8$

4)  $67 + 7 = 65 + 9$

10)  $40 + 4 = 17$

5)  $51 + 5 = 11 + 45$

11)  $66 + 13 = 4 + 75$

6)  $83 + 4 = 70 + 16$

12)  $60 + 23 = 53 + 30$



Name: \_\_\_\_\_

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**Addition - Which Equation Matches?**

Two of the equations equal the same number. Which one matches the shaded in equation

Example

$4 + 7$

$9 + 2$

$5 + 5$

**Questions**

Circle the equation that matches the shaded in equation

1)

$16 + 12$

$24 + 5$

2)

$46 + 6$

$12$

$44 + 3$

3)

$52 + 14$

$51 + 18$

$61 + 5$

4)

$63 + 12$

$45 + 35$

$25$

5)

$82 + 12$

$70 + 24$

$55 + 40$

6)

$68 + 13$

$75 + 7$

$61 + 20$

7)

$53 + 22$

$40 + 35$

$55 + 21$

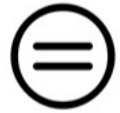
Name: \_\_\_\_\_  
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## Addition - Find the Variable

A variable is a letter that represents an unknown number. When we don't know a number, we can use a letter to take the place of the unknown number.

Example:  $8 + n = 15$

We can figure out the unknown number by balancing the equation. In this equation,  $n = 7$ .



Question

Find out the value of the variable

|                          |                          |
|--------------------------|--------------------------|
| $n + 5 = 12$<br>$n =$    | $22 + n = 30$<br>$n =$   |
| $12 + 12 = p$<br>$p =$   | $p + 13 = 25$<br>$p =$   |
| $15 + y = 30$<br>$y =$   | $13 + 35 = y$<br>$y =$   |
| $78 + t = 92$<br>$t =$   | $14 + t = 28$<br>$t =$   |
| $114 + a = 117$<br>$a =$ | $135 + a = 150$<br>$a =$ |
| $22 + 165 = s$<br>$s =$  | $121 + s = 143$<br>$s =$ |
|                          | $150 + a = 172$<br>$a =$ |
|                          | $133 + s = 141$<br>$s =$ |

# Word Problems - Solving Addition Equations

## Questions

Answer the questions below

1) Tim drove 31km to get to work. Then he drove to the store. When he got to the store, he had driven 58 km in total. How many km did he drive to the store?



2) Steve got 25 points for beating level 1 in a video game. He got 33 more points for beating level 2. How many total points did he have after level 2?



**Bonus** – He had 78 total points after beating level 3. How many points did he get in level 3?

3. In badminton, Jessica and Erin won their game. They scored 21 points and their opponents only scored 16. Jessica scored 13 of the 21 points. How many points did Erin score?





# Pre-Algebra - Balancing Subtraction Equations

Balance the scales by taking away  
circles from the scale

Answer: take 4 circles from the scale  
to make them equal.



$$\boxed{7} - \boxed{4} = \boxed{3}$$

Questions

How many balls do you need to take away to balance the scales?



$$\boxed{11} - \boxed{\phantom{00}} = \boxed{8}$$



$$\boxed{10} - \boxed{\phantom{00}} = \boxed{5}$$



$$\boxed{10} - \boxed{\phantom{00}} = \boxed{4}$$



$$\boxed{8} - \boxed{\phantom{00}} = \boxed{1}$$



$$\boxed{11} - \boxed{\phantom{00}} = \boxed{3}$$



$$\boxed{13} - \boxed{\phantom{00}} = \boxed{2}$$



$$\boxed{10} - \boxed{\phantom{00}} = \boxed{4}$$



$$\boxed{14} - \boxed{\phantom{00}} = \boxed{1}$$



$$\boxed{4} - \boxed{\phantom{00}} = \boxed{0}$$



Name: \_\_\_\_\_

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Curriculum Connection  
PR.3

## Subtraction - Are They Equal?

Are the equations equal? Put an X through the equal sign for any equations that are not equal

$7 - 2 = 5$

$25 - 6 \neq 18$

$15 - 11 = 4$

### Questions

Put an x through the equal sign if it is not balanced

1)  $1 - 10 = 10$

2)  $10 - 4 = 6$

3)  $16 - 5 = 12$

4)  $23 - 6 = 10$

5)  $10 - 5 = 16$

6)  $19 - 3 = 16$

7)  $32 - 4 = 28$

8)  $10 - 5 = 2$

9)  $28 - 4 = 24$

10)  $43 - 10 = 33$

11)  $45 - 4 = 42$

12)  $45 - 3 = 62$

13)  $53 - 4 = 49$

14)  $68 - 4 = 65$

15)  $53 - 6 = 51$

16)  $75 - 0 = 75$

17)  $100 - 1 = 99$

18)  $116 - 5 = 111$

19)  $109 - 4 = 104$

20)  $127 - 6 = 121$

21)  $175 - 6 = 159$

**Pre-Algebra - Balancing Addition Equations**

Balancing equations means both sides of the equal sign must be the same.

$$\begin{array}{c} 3 \\ \swarrow \downarrow \searrow \\ 7 - 4 = \boxed{3} \end{array}$$

Examples:

$$\begin{array}{c} 8 \\ \swarrow \downarrow \searrow \\ 14 - \boxed{6} = 8 \end{array}$$

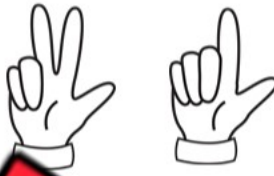
**Questions**

Fill in the missing number to balance the equation

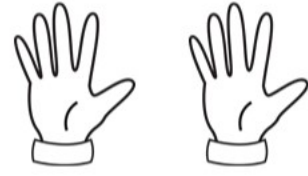
1)  $4 - \square = \square$



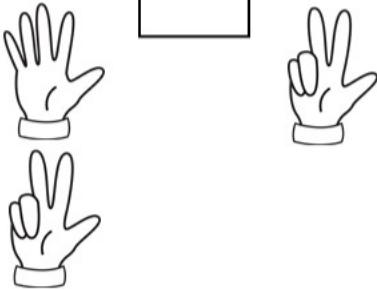
2)  $3 - 2 = \square$



3)  $5 - 5 = \square$



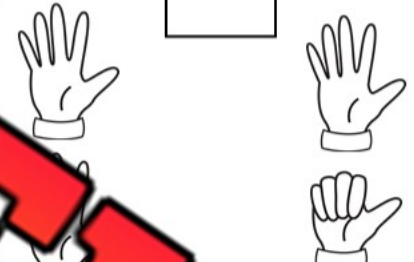
4)  $8 - \square = 3$



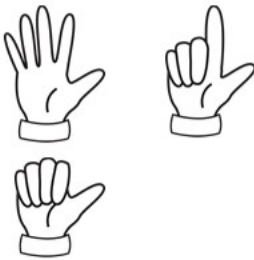
5)  $6 - \square = 2$



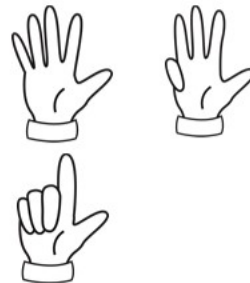
6)  $10 - \square = 6$



7)  $\square - 6 = 2$



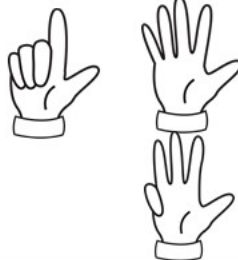
8)  $\square - 7 = 4$



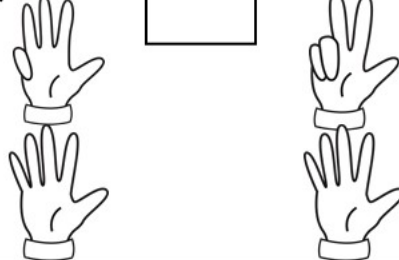
9)  $\square - 10 = \square$



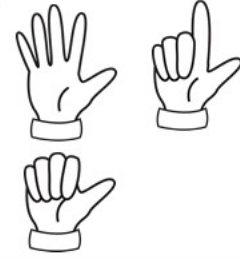
10)  $\square - 2 = 9$



11)  $9 - \square = 8$



12)  $6 - 2 = \square$



**Pre-Algebra - Balancing Subtraction Equations**

Balancing equations means both sides of the equal sign must be the same.

$$\begin{array}{c} 9 \\ \swarrow \searrow \\ 15 - 6 = \boxed{9} \end{array}$$

Examples:

$$\begin{array}{c} 15 \\ \swarrow \searrow \\ 20 - \boxed{5} = 15 \end{array}$$

**Questions**

Fill in the missing number to balance the equation

1)  $15 - 8 = \boxed{\phantom{00}}$

2)  $11 - 6 = \boxed{\phantom{00}}$

3)  $10 - 5 = \boxed{\phantom{00}}$

4)  $10 - \boxed{\phantom{00}} =$

$\boxed{\phantom{00}} = 6$

6)  $14 - \boxed{\phantom{00}} =$

$\boxed{\phantom{00}} = 10$

7)  $\boxed{\phantom{00}} - 6 = 10$

8)  $\boxed{\phantom{00}} - 5 = 12$

9)  $\boxed{\phantom{00}} - 8 = 12$

10)  $55 - 10 = \boxed{\phantom{00}}$

11)  $72 - \boxed{\phantom{00}} = 65$

12)  $\boxed{\phantom{00}} - 12 = 50$

13)  $74 - \boxed{\phantom{00}} = 67$

14)  $112 - 6 = \boxed{\phantom{00}}$

15)  $180 - \boxed{\phantom{00}} = 160$

16)  $143 - \boxed{\phantom{00}} = 135$

17)  $115 - 15 = \boxed{\phantom{00}}$

18)  $125 - \boxed{\phantom{00}} = 110$

19)  $106 - \boxed{\phantom{00}} = 99$

20)  $125 - 21 = \boxed{\phantom{00}}$

21)  $145 - \boxed{\phantom{00}} = 100$



Name: \_\_\_\_\_

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# Subtraction Expressions - Equal?

Are the expressions equal? Put a slash through the equal sign for any equations that are not equal

**Examples:**  $8 - 5 = 9 - 6$        $10 - 5 \neq 7 - 1$



**Questions** Put a slash ( $\neq$ ) through the equal sign if it is not balanced

1)  $21 - 17 = 17 - 17$

7)  $25 - 3 = 26 - 3$

2)  $37 - 5 = 9 - 6$

8)  $27 - 5 = 28 - 6$

3)  $58 - 11 = 55 - 7$

9)  $43 = 54 - 4$

4)  $70 - 7 = 80 - 17$

10)  $39 - 4 = 15$

5)  $78 - 5 = 82 - 8$

11)  $86 - 5 = 94 - 13$

6)  $95 - 15 = 100 - 18$

12)  $100 - 12 = 95 - 7$



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**Subtraction - Which Equation Matches?**

Two of the equations equal the same number. Which one matches the shaded in equation

Example

$9 - 4$

$8 - 3$

$10 - 6$

**Questions**

Circle the equation that matches the shaded in equation

1)

 $4$ 

$24 - 13$

$27 - 15$

2)

 $28$  $4$ 

$25 - 12$

$27 - 13$

3)

$30 - 12$

 $9 - 2$ 

$39 - 21$

4)

$47 - 12$

$46 - 11$

$46 - 13$

5)

$62 - 13$

$61 - 12$

$63 - 15$

6)

$85 - 15$

$90 - 15$

$90 - 20$

7)

$99 - 15$

$98 - 13$

$90 - 6$

**Word Problems - Solving Subtraction Equations****Questions**

Answer the questions below

1) Mrs. Wilson had 48 pencils at the start of the school year. She gave all the kids in her class 1 pencil. She now has 28 pencils. How many students are in Mrs. Wilson's class?



2) Hudson saved 8 dollars and bought a new toy for 35 dollars. How many dollars does he have left?



Bonus: He saved 15 more dollars. Can he buy a new video game for 50 dollars?

3) The grade 3 class planted 79 tomato seeds but only 57 tomato plants grew. How many plants did not grow?



Name: \_\_\_\_\_

## Algebra Quiz - Equations

### Part 1

Put an x through the equal sign if it is not balanced

1)  $25 + 15 = 45$

2)  $42 + 6 = 48$

3)  $87 + 15 = 103$

4)  $127 + 16 = 111$

5)  $274 - 24 = 249$

6)  $326 - 14 = 318$

Part 2 Fill in the missing number to balance the equation

1)  $13 + 8 = \square = 42$

3)  $9 + \square = 65$

4)  $137 + 8 = \square$

5)  $\square + 18 = 32$

6)  $25 + \square = 60$

7)  $9 - 6 = \square$

8)  $\square - 12 = 8$

9)  $47 - 8 = \square$

10)  $109 - 5 = \square$

11)  $\square - 7 = 132$

12)  $170 - 6 = \square$

### Part 3

Find out the value of the variable

|                        |                       |                        |                        |
|------------------------|-----------------------|------------------------|------------------------|
| $7 + n = 10$<br>$n =$  | $n - 5 = 15$<br>$n =$ | $10 + n = 30$<br>$n =$ | $n - 5 = 28$<br>$n =$  |
| $n + 16 = 42$<br>$n =$ | $n - 3 = 48$<br>$n =$ | $n + 10 = 76$<br>$n =$ | $n - 12 = 10$<br>$n =$ |

### Part 4

Find out the value of the variable

|                                                                                                  |                                                     |                                                                                                  |                                                             |                                                     |                                                    |
|--------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------|
| $a + b + c =$<br>$\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$ | $b = 2$<br>$\underline{\quad} = \underline{\quad}$  | $n + y + t =$<br>$\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$ | $n = 5$<br>$\underline{\quad} = \underline{\quad}$          | $y = 10$<br>$\underline{\quad} = \underline{\quad}$ | $t = 5$<br>$\underline{\quad} = \underline{\quad}$ |
| $a - b = c$<br>$\underline{\quad} - \underline{\quad} = \underline{\quad}$<br>$c =$              | $a = 13$<br>$\underline{\quad} = \underline{\quad}$ | $b = 8$<br>$\underline{\quad} = \underline{\quad}$                                               | $e = f$<br>$\underline{\quad} = \underline{\quad}$<br>$f =$ | $e = 26$<br>$\underline{\quad} = \underline{\quad}$ | $n = 6$<br>$\underline{\quad} = \underline{\quad}$ |

### Part 5

Solve the word problem below. Make sure to write an equation

Alexa saved 47 dollars from her allowance. She was given some money from her grandmother for her birthday. She now has 80 dollars. How much did her grandmother give her?