BIG 10

Input-Output Tables & Patterns

Ten ways to reinforce problem solving with Input-Output Tables and Patterns and prep for testing!

Teaching in the Fast Lane

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To the Teacher

- This product is meant to be a no frills, all action tool for cementing the concept of patterns and number relationships in input-output tables in preparation for standardized testing.
- Each activity can be completed in a variety of ways to fit your classroom needs.
- It was created with the following standards in mind:
  - TEKS
    - 4.5(B)represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence
  - Common Core
    - CCSS.MATH.CONTENT.4.OA.C.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of a pattern that were not explicit in the rule itself.

Prep Recommendations

- Each activity is created in black and white to conserve color ink
  - Using colored paper to differentiate different parts in each activity or the different stations will help students to stay organized.
- If you plan to use the activities for small group or partner activities over time, I would recommend laminating them for durability.

Content Vocabulary

rule

input numbers

pattern

output numbers

sequence

related set

relationship

numerical expression

Pattern Match

Match the rule to the pattern and record the match on the response sheet.

Operation Sort

Examine each input-output table and sort it based on the operation of the rule.

Teacher Suggestions
Operation Sort

- In this activity students are asked to sort input-output tables based on the operation their rule uses
- This activity can be used in a variety of ways
  - Small group with teacher guidance
  - A partner activity to practice
  - Independently to assess

Materials

Included:
- Input-Output table cards
- Sorting Mat
- Recording sheet
- Answer Key

Not Included:
- Pencil

ADDITION

SUBTRACTION

OPERATION SORT

MULTIPLICATION

DIVISION

1

INPUT	OUTPUT
3	7
9	13
10	14
14	18

2

INPUT	OUTPUT
12	4
36	12
72	24
90	30

3

INPUT	OUTPUT
14	28
16	32
18	36
20	40

4

INPUT	OUTPUT
53	75
68	65
58	55
40	45

5

INPUT	OUTPUT
9	81
12	108
15	135
18	162

6

INPUT	OUTPUT
13	25
26	38
39	51
91	103

7

INPUT	OUTPUT
19	16
17	14
15	11
13	10

8

INPUT	OUTPUT
40	160
60	240
80	320
100	400

9

INPUT	OUTPUT
0	0
6	
12	0
18	0

10

INPUT	OUTPUT
125	5
100	4
75	3
50	2

11

INPUT	OUTPUT
181	162
162	143
143	124
124	105

12

INPUT	OUTPUT
37	31
56	50
75	69
94	88

13

INPUT	OUTPUT
70	72
60	62
50	52
40	42

14

INPUT	OUTPUT
48	4
36	3
24	2
12	1

15

INPUT	OUTPUT
39	63
36	[illegible]
33	57
30	54

16

INPUT	OUTPUT
116	29
224	56
336	84
448	112

17

INPUT	OUTPUT
76	38
64	32
52	26
44	22

18

INPUT	OUTPUT
19	57
21	63
23	69
25	75

Name _____ #_____ Date _____

Operation Sort Response Sheet

Sort each input-output table based on the operation of the r

ADDITION	SUBTRACTION	MULTIPLICATION	DIVISION

Operation Sort Answer Key

ADDITION	SUBTRACTION	MULTIPLICATION	DIVISION
1	4	3	2
6	7	5	10
13	11	8	14
15	12	9	16
		18	17

What's the Situation?

Read each situation and find the input-output table that fits. Record your answers on the response sheet.

Create it!

Create an input-output table based on the rule provided.

Input-Output Machine

Draw an input and rule card then find the output. Record all three on the response sheet.

Stump the class

Create your own input-output tables with rules that you think will stump your class.

Scan it!

Beginning with the "START" card scan the QR Codes and follow the answers using all the cards until you reach the "END" card.

It's All Situational

Write a problem situation that fits each input-output table.

Plethora of Patterns

Create a number pattern based on each of the rules provided.

Name That Rule

Identify the rule for each input-output table and record it on the response sheet.

Name _____ #_____ Date _____

Test Bridge Questions

1. What is the missing number?

Input	Output
10	4
18	
[illegible]	20

a. 12
b. 16
c. 15
d. 8

2. A donut shop packs donuts in boxes of a dozen each.
a. 15 feet
b. 15 yards
c. 15 inches
d. 15 miles

3. Alex has 30 inches of wire. He uses 1 foot. How many inches of wire is left?
a. [illegible] inches
b. 2[illegible] inches
c. 4[illegible] inches
d. 6[illegible] inches

4. Paula bought three 12 ounce steaks. How many pounds of steak did she buy?
a. 3 pounds 2 ounces
b. 192 pounds
c. 2 pounds 4 ounces
d. 4 pounds 2 ounces

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