Name_____ Date_____

SUBSTITUTION

For the next 12 problems, let x=4 and y=5.

Solve

1) $(x+y)^2=$

2) $4(x+y)=$

3) $5(y-x)=$

4) $\left(\frac{35}{y}\right)^2=$

5) $x^2 + y^2 =$

6) $\left(\frac{50}{y}\right)+\left(\frac{16}{x}\right)=$

7) $6x + 3 =$

8) $x^3 - y + 4 =$

9) $3x + 4y =$

10) $\frac{44}{x} =$

11) $5x - 4y =$

12) $4(x + 6)^2 =$

FUNCTIONS

13) If the pattern continues, what rule would you use to find the second number in the pattern?

(350, 35) (320 , 32) (300 , 30) (240 , 24) (200 , __y__)

y = _____

a) subtract 315 from the first number b) Divide the first number by 10

c) Divide the first number by 5 d) Subtract 300 from the first number and add 30

14) If the pattern continues, what rule should be applied to the first number to get the second number?

(5 , 26) (7 , 34) (9 , 42) (11 , 60) (13 , __y__)

y = _____

a) add 2 to the first number b) add 9 to the second number

c) multiply the first number by 5 and add 1 d) multiply the first number by 4 and add 6

15) If the pattern continues, what rule should be applied to the first number(x) to get the second(y)?

(1 , 3) (5 , 23) (9 , 43) (11 , 53) (13 , __y__)

a) multiply by 5 and then subtract 2 b) multiply by 3 c) add 2 d) multiply by 10

Maisonet √Math

y = _____

Study each function box below. Write the rule which is being applied to each x value to get the y value.

16)

x	y
5	17
8	26
11	35
15	47

17)

x	y
1	15
2	35
3	55
4	75

18)

x	y
100	15
150	20
200	25
250	30

19)

x	y
2	16
7	56
12	96
17	136

_____ _____ _____ _____

_____ _____ _____ _____

Using the function rule given for each function box, calculate the y values and fill in the blanks.

Multiply x by 4 and add 2.

20)

x	y
5	
6	
7	
8	

Divide x by 5 and subtract 2.

21)

x	y
50	
60	
70	
80	

Add 4 to x and divide by 5.

22)

x	y
11	
16	
21	
31	

Multiply x by 7 and add 3.

23)

x	y
4	
6	
7	
11	

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24) Study the data in the table below. If a person traveling in a plane maintained the same rate of speed for 7 hours, how many miles would that person have traveled?

hours traveled	miles traveled
1	350
2	700
3	1,050
4	1,400

_____

_____

25) With the new sweep policy, the number of late students have steadily decreased each week. If the rate remains the same, how many students can be expected to be late during week 8?