

Name: _____

Class/Period: _____

Assignment: MM ALGEBRA ASSIGNMENT 2

Teacher: Villegas

1 What is the value of x in the equation $287 + x = 792$?

- 1 498
- 2 505
- 3 538
- 4 612

2 A student formed a pattern, which is shown in the table below. The first four terms of the pattern are displayed.

Term	Value
1	1
2	8
3	27
4	64

What expression can be used to determine the value of any term, n ?

- 1 n^3
- 2 n^2
- 3 $3n$
- 4 $2n$

3 Louis and Tony are building houses out of blocks. Louis has 30 blocks, and gives Tony 13 blocks to build with. Which equation can be used to determine the number of blocks Louis has left to build his house with?

- 1 $30 - 13 = x$
- 2 $13 - 30 = x$
- 3 $30 - x = 13$
- 4 $x - 13 = 30$

4 An equation is given below.

$$4(2x - 3) = 0.2(x + 5) + 5.72$$

The solution to the equation is

- 1 0.9
- 2 1.8
- 3 2.4
- 4 3.6

5 Which table represents a relation that is not a function?

1

Input	Output
-4	16
-2	4
2	4
4	16

3

Input	Output
2	1
4	2
4	3
8	4

2

Input	Output
-1	6
-2	15
-3	24
-4	33

4

Input	Output
1	-15
5	0
9	5
10	25

6 What is the value of the expression below?

$$18 + 2(7 - 4)^3$$

- 1 36
- 2 72
- 3 234
- 4 540

7 What is the value of the t that satisfies the equation below?

$$5(t + 2) - 3(2t + 1) = -2$$

- 1 0
- 2 -2
- 3 9
- 4 15

8 What is the solution to the equation $3x + 9 - 7x = 2(x + 6)$?

- 1 $-\frac{1}{2}$
- 2 $\frac{1}{2}$
- 3 -6
- 4 6

9 Solve the equation below for x .

$$\frac{2}{3}x - 7 = 18$$

- 1 $x = 5.5$
- 2 $x = 16.5$
- 3 $x = 16.67$
- 4 $x = 37.5$

- 10 Lynn, Jude, and Anne were given the function $f(x) = -2x^2 + 32$, and they were asked to find $f(3)$. Lynn's answer was 14, Jude's answer was 4, and Anne's answer was ± 4 . Who is correct?

- 1 Lynn, only
- 2 Jude, only
- 3 Anne, only
- 4 Both Lynn and Jude

- 11 What is the domain of the relation shown below?

$\{(4,2), (1,1), (0,0), (1,-1), (4,-2)\}$

- 1 $\{0, 1, 4\}$
- 2 $\{-2, -1, 0, 1, 2\}$
- 3 $\{-2, -1, 0, 1, 2, 4\}$
- 4 $\{-2, -1, 0, 0, 1, 1, 1, 2, 4, 4\}$

- 12 In which set do all the values make the inequality $3x + 8 > 14$ true?

- 1 $\{1, 2, 3\}$
- 2 $\{2, 4, 6\}$
- 3 $\{2, 3, 4\}$
- 4 $\{3, 4, 5\}$

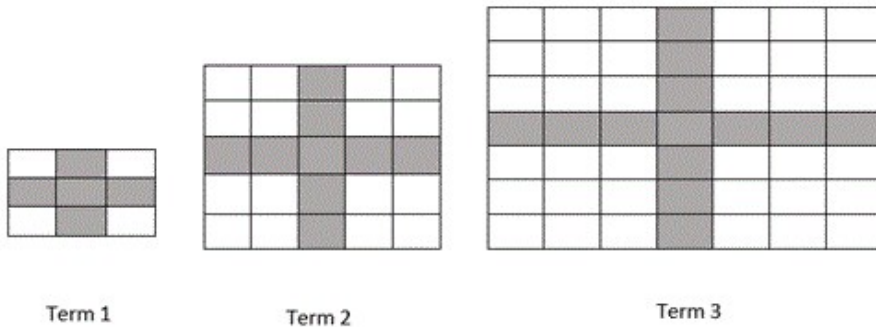
- 13 The table below shows the number of seats in a theater based on the number of rows.

Row, n	Number of Seats, S
1	18
2	31
3	44
4	57
5	70

Which function represents the number of seats in a theater with n rows?

- 1 $S(n) = 18 + 13(n - 1)$
- 2 $S(n) = 13 + 18(n - 1)$
- 3 $S(n) = 5n + 13$
- 4 $S(n) = 13n + 18$

14 The diagram below represents the first three terms in a sequence.



Assuming the pattern continues, which formula determine a_n the number of shaded rectangles in the n th term?

- 1 $a_n = 3n + 1$
- 2 $a_n = 2n + 1$
- 3 $a_n = 4n + 1$
- 4 $a_n = 5n - 1$

15 Read the text below:

10 more than the product of 3 and 6

Which expressions below are correct interpretations of this text?

- $10 \times 3 + 6$
- $10 + 3 \times 6$
- $(10 + 3) \times 6$
- $6 \times 3 \times 10$
- $6 \times 3 + 10$

16 The table shows the weight, in pounds, of flour x that a pizza maker uses for y dough balls.

x (pounds)	10	20	30	40
y (dough balls)	22	44	66	88

If the pattern continues, how many pounds of flour x does the baker need to use for 220 dough balls?

- 1 50 pounds
- 2 80 pounds
- 3 100 pounds
- 4 484 pounds

17 Which expression represents “5 less than twice x ”?

- 1 $2x - 5$
- 2 $5 - 2x$
- 3 $2(5 - x)$
- 4 $2(x - 5)$

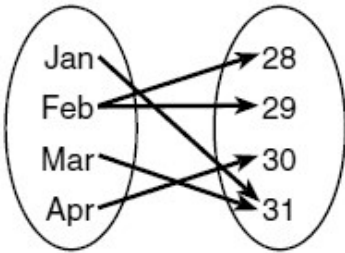
- 18 Solve for h :
 $(h \times 6) \div 3 = 34$

$h = \boxed{}$

- 19 If the domain of the function $f(x) = 2x^2 - 8$ is $\{-2, 3, 5\}$, then the range is

- 1 $\{-16, 4, 92\}$
- 2 $\{-16, 10, 42\}$
- 3 $\{0, 10, 42\}$
- 4 $\{0, 4, 92\}$

- 20 A mapping is shown in the diagram below.



This mapping is

- 1 a function, because Feb has two outputs, 28 and 29
 - 2 a function, because two inputs, Jan and Mar, result in the output 31
 - 3 not a function, because Feb has two outputs, 28 and 29
 - 4 not a function, because two inputs, Jan and Mar, result in the output 31
- 21 If $f(n) = (n - 1)^2 + 3n$, which statement is true?

- 1 $f(3) = -2$
- 2 $f(-2) = 3$
- 3 $f(-2) = -15$
- 4 $f(-15) = -2$

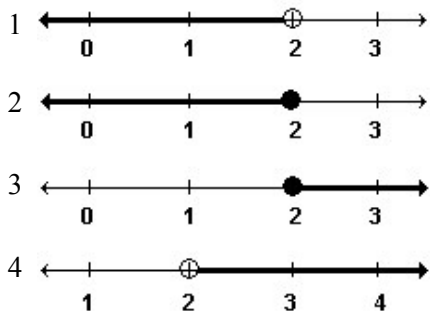
- 22 What is the n th term of the sequence $-1, 3, 7, 11, \dots$?

- 1 $a_n = -1 - 4(n - 1)$
- 2 $a_n = -1 + 4(n - 1)$
- 3 $a_n = 4 - (n - 1)$
- 4 $a_n = 4 + (n - 1)$

- 23 When $3a + 7b > 2a - 8b$ is solved for a , the result is

- 1 $a > -b$
- 2 $a < -b$
- 3 $a < -15b$
- 4 $a > -15b$

24 Which of the following graphs represents the solution set for $-2(x - 1) \geq x - 4$?



25 If $f(x) = 4x + 5$, what is the value of $f(-3)$?

- 1 -2
- 2 -7
- 3 17
- 4 4

26 Students were asked to write $6x^5 + 8x - 3x^3 + 7x^7$ in standard form. Shown below are four student responses.

Anne: $7x^7 + 6x^5 - 3x^3 + 8x$

Bob: $-3x^3 + 6x^5 + 7x^7 + 8x$

Carrie: $8x + 7x^7 + 6x^5 - 3x^3$

Dylan: $8x - 3x^3 + 6x^5 + 7x^7$

Which student is correct?

- 1 Anne
- 2 Bob
- 3 Carrie
- 4 Dylan

27 Jenna took a survey of her senior class to see whether they preferred pizza or burgers. The results are summarized in the table below.

	Pizza	Burgers
Male	23	42
Female	31	26

Of the people who preferred burgers, approximately what percentage were female?

- 1 21.3
- 2 38.2
- 3 45.6
- 4 61.9

28 Nicci's sister is 7 years less than twice Nicci's age, a . The sum of Nicci's age and her sister's age is 41. Which equation represents this relationship?

- 1 $a + (7 - 2a) = 41$
- 2 $a + (2a - 7) = 41$
- 3 $2a - 7 = 41$
- 4 $a = 2a - 7$

29 When written in factored form, $4w^2 - 11w - 3$ is equivalent to

- 1 $(2w + 1)(2w - 3)$
- 2 $(2w - 1)(2w + 3)$
- 3 $(4w + 1)(w - 3)$
- 4 $(4w - 1)(w + 3)$

30 Given the following three sequences:

I. 2, 4, 6, 8, 10...

II. 2, 4, 8, 16, 32...

III. $a, a + 2, a + 4, a + 6, a + 8...$

Which ones are arithmetic sequences?

- 1 I and II, only
- 2 I and III, only
- 3 II and III, only
- 4 I, II, and III