

Math 7 Unit 1 Test**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- _____ 1. Identify the numerical coefficient in the algebraic expression $12 + 5x$.
a. 12 b. 5 c. $5x$
- _____ 2. Identify the constant term in the algebraic expression $13 + 3x$.
a. 13 b. 3 c. $3x$
- _____ 3. Write an algebraic expression for the sum of m and 4.
a. $m - 4$ b. $m + 4$ c. $\frac{m}{4}$
- _____ 4. Write an algebraic expression for a number divided by 4.
a. $\frac{x}{4}$ b. $x - 4$ c. $\frac{4}{x}$
- _____ 5. Evaluate the expression by replacing x with 2.
 $x + 11$
a. 13 b. 22 c. $x + 2$
- _____ 6. The cost of a school banquet is \$110 for the room rental and \$12 per person attending. Write an algebraic expression to represent the total cost of the banquet for p people.
a. $12p + 110$ b. $12 + 110p$ c. $110 + 12p$
- _____ 7. If n represents any term number, write a relation for the term.
- | | | | | | | | |
|-------------|--|----|----|----|----|----|----|
| Term Number | | 10 | 11 | 12 | 13 | 14 | 15 |
| Term | | 24 | 25 | 26 | 27 | 28 | 29 |
- a. $n + 24$ b. $n + 14$ c. $n + 10$

Name: _____

ID: A

_____ 8. Complete the table.

Input x	1	2	3	4	5
Output $6x + 3$					

a.

Input x	1	2	3	4	5
Output $6x + 3$	9	15	21	27	33

b.

Input x	1	2	3	4	5
Output $6x + 3$	9	24	30	36	42

c.

Input x	1	2	3	4	5
Output $6x + 3$	24	30	36	42	48

_____ 9. Write an equation for the sentence.

Three less than a number is 10.

a. $3 - n = 10$

b. $n - 3 = 10$

c. $\frac{n}{3} = 10$

_____ 10. A tree was 4 m tall. One year later, the tree grew f m and became 10 m tall. Write an equation for the height of the tree.

a. $\frac{f}{10} = 4$

c. $4 + f = 10$

b. $f + 10 = 4$

_____ 11. Eleven more than 5 times a number is 31. What is the number?

a. 93

b. 4

c. 15

Name: _____

ID: A

- _____ 12. Which number is divisible by 8?
84, 126, 168, 172
a. 84 b. 168 c. 172
- _____ 13. Which number is divisible by 4 **and** by 5?
210, 630, 420, 315
a. 630 b. 210 c. 420
- _____ 14. Write an algebraic expression for j multiplied by 3.
a. $j + 3$ b. $3j$ c. $\frac{j}{3}$
- _____ 15. Evaluate the expression by replacing t with 10.
 $8t - 3$
a. 77 b. 84 c. 83
- _____ 16. Complete the table.

Input m	1	2	3	4	5
Output $14 - m$					

a.

Input m	1	2	3	4	5
Output $14 - m$	15	16	17	18	19

b.

Input m	1	2	3	4	5
Output $14 - m$	14	13	12	11	10

c.

Input m	1	2	3	4	5
Output $14 - m$	13	12	11	10	9

Name: _____

ID: A

_____ 17. Use algebra. Write a relation for the Input/Output table.

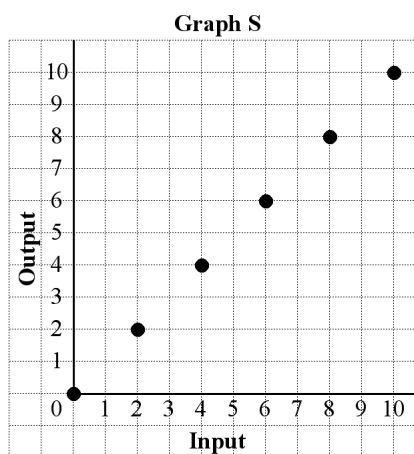
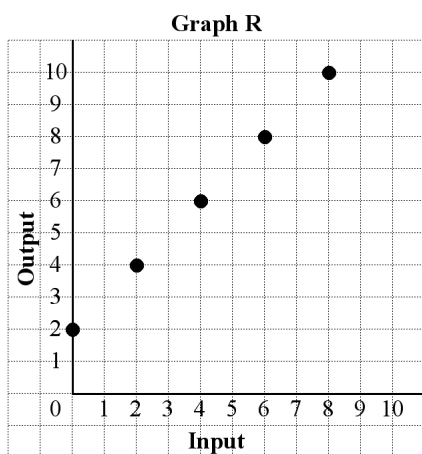
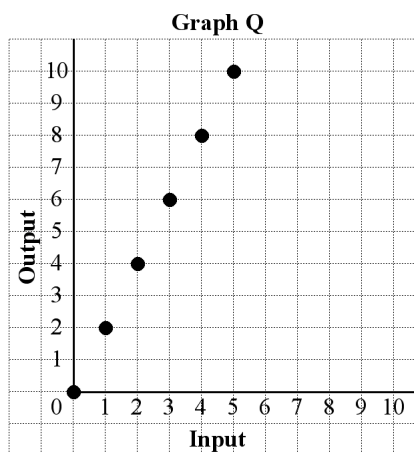
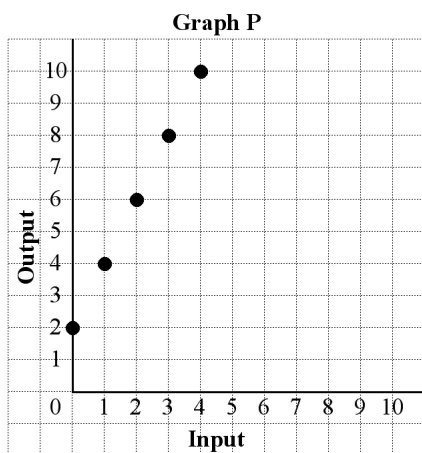
Input p	1	2	3	4	5
Output	9	10	11	12	13

a. $p + 9$

b. $p + 8$

c. $8p$

_____ 18. Which graph shows how $2x$ is related to x ?

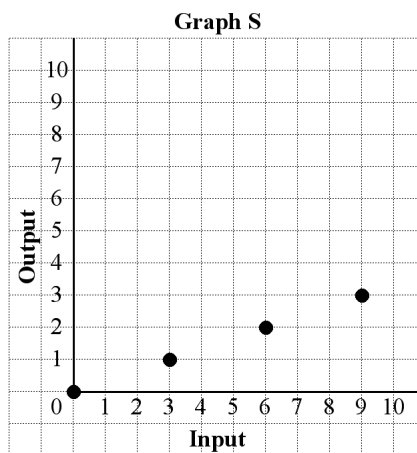
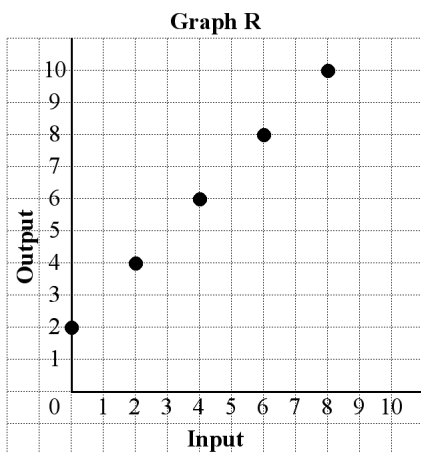
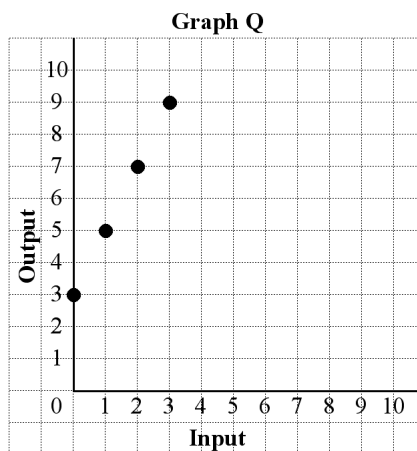
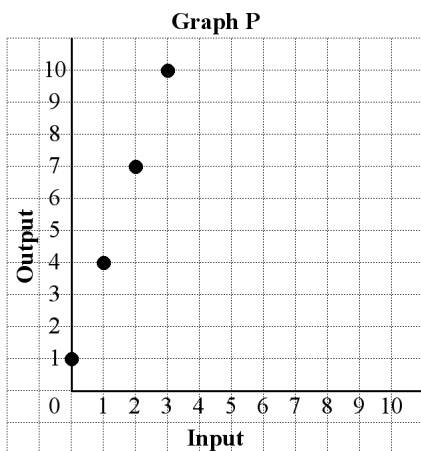


a. Graph R

b. Graph Q

c. Graph S

_____ 19. Which graph shows how $3x + 1$ is related to x ?



- a. Graph P b. Graph S c. Graph R

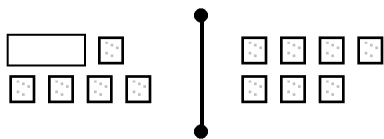
_____ 20. Write an equation for the situation.
Each of 5 people contributed x dollars to buy a gift that costs \$40.

- a. $5x = 40$ c. $40 - x = 5$
b. $5 + x = 40$

_____ 21. One book costs \$9. How many books could be bought with \$63?

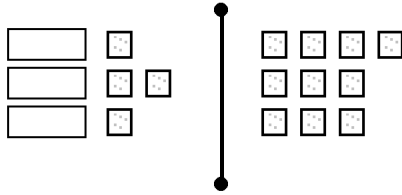
- a. 7 b. 45 c. 6

_____ 22. Let one white square represent $+1$ and one white rectangle represent x .
Solve the equation modelled by this set of tiles.



- a. $x = 2$ b. $x = 3$ c. $x = 7$

- _____ 23. Let one white square represent $+1$ and one white rectangle represent x .
Solve the equation modelled by this set of tiles.



- a. $x = 4$ b. $x = 2$ c. $x = 10$

Long Answer- Please complete on loose leaf paper. Show all your work for complete marks.

24. On a school trip to the museum the cost of hiring the bus is \$35. Entrance to the museum is \$5 per person.
a) Write a relation for the cost when p people go on the trip.
b) What is the total cost if 20 people go on the trip?
25. Use tiles to solve the equation.
 $9 + x = 22$

26. Copy and complete the table.

Input x	4	5	6	7	8
Output $2x + 6$					

- a) Graph the table
b) What is the Output number when $x = 10$?
- 27.
- a) Are the numbers in Set A multiples of the same number? What number?
b) Are the numbers in Set B multiples of the same number? What number?
c) What can you say about the numbers in the overlapping region?

