NAME:_____

Corrective Assignment

DATE:_____

Identify the independent and dependent variable. Create and label a scatter plot. Answer the question.

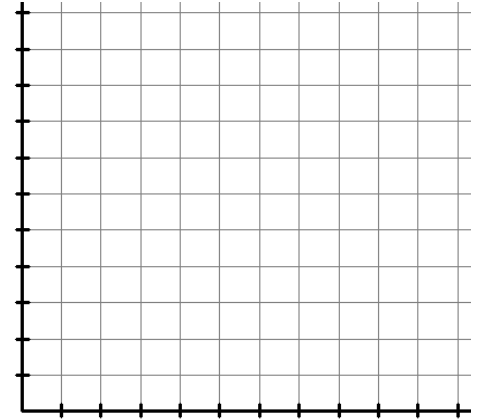1. The volume of a cube is determined by the length of a side of that cube as shown in the table below.

Side (cm)	Volume (cm^3)
0	0
2	8
4	64
6	216
7	343
8	512

Independent Variable

____ = _____

Dependent Variable

____ = _____

a) What does the point $(3, 27)$ mean in this situation?

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2. Bob wants to fence in his backyard. The cost of the fence is determined by how much fencing he uses.
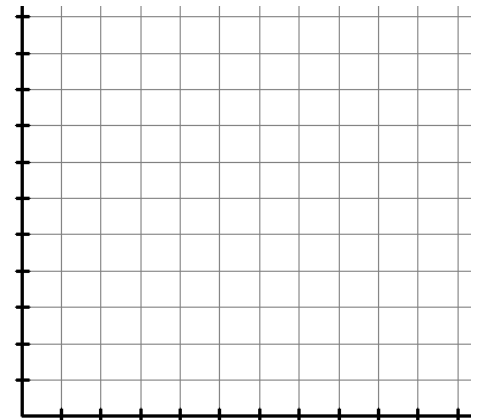
Fence Used (ft)	Cost (dollars)
40	150
90	225
130	285
150	315
180	360
220	420

Independent Variable

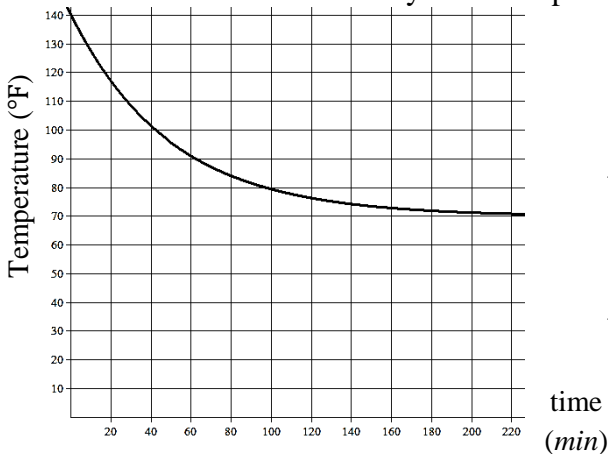____ = _____

Dependent Variable

____ = _____

a) What does the point $(200, 390)$ mean in this situation?

Use the graph to identify the independent and dependent variable. Fill in the table and answer the questions.

3. Hot coffee is left out in a Styrofoam cup. The graph shows the temperature of the coffee over time.

Independent Variable

____ = _____

Dependent Variable

____ = _____

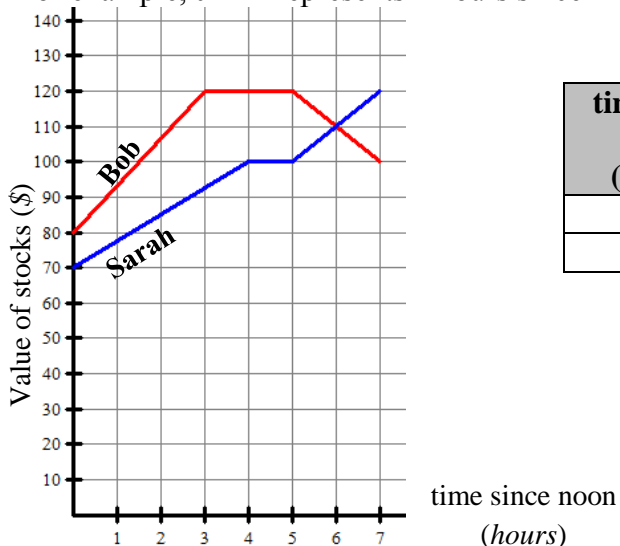| ____ (___)	____ (___)
20	
130	
	130
	85

a) What does the point $(100, 80)$ mean in this situation?

4. Bob and Sarah are day traders. The value of their stocks in one afternoon is shown below.
    t represents the time since 12 o'clock. For example, $t = 2$ represents 2 hours since 12 o'clock or 2 o'clock.

BOB

time since noon (hours)	value of stocks ($)
4	
7	

SARAH

time since noon (hours)	Value of stocks ($)
0	
5	

a) Describe the value of Bob's stocks on the intervals 0-3, 3-5, and 5-7.

b) Find the point of intersection. What does it represent?

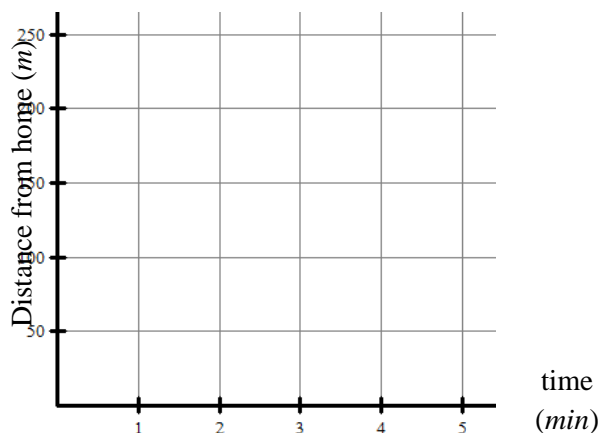c) Find Bob's y-intercept. What does it represent in this situation?

5. Bob and Sarah are brother and sister. Bob is walking home from the library. Sarah is walking to the library.

BOB

$d = 250 - 50t$

_____ (____)	_____ (____)
0	
1	
2	

SARAH

$d = 75t$

_____ (____)	_____ (____)
0	
1	
2	

a) Label each line above as Bob or Sarah. Explain how you know which is which.

b) Find the point of intersection. What does it represent?

c) What is Bob's x-intercept? What does it represent?

TRUE/FALSE Circle true or false. If true, circle the property used to determine the expressions equivalent.

6. $n - 4 = -4 + n$	7. $(x \cdot 3)y = x(3 \cdot y)$	8. $2(a + b) = 2a + 2b$
TRUE or FALSE	TRUE or FALSE	TRUE or FALSE
If true, equivalent by…	If true, equivalent by…	If true, equivalent by…
Commutative Property	Commutative Property	Commutative Property
Associative Property	Associative Property	Associative Property
Distributive Property	Distributive Property	Distributive Property
9. $3(x + 4) = (x + 4)3$	10. $a(5 + b) = a + 5b$	11. $(a + b) + 2c = a + (b + 2c)$
TRUE or FALSE	TRUE or FALSE	TRUE or FALSE
If true, equivalent by…	If true, equivalent by…	If true, equivalent by…
Commutative Property	Commutative Property	Commutative Property
Associative Property	Associative Property	Associative Property
Distributive Property	Distributive Property	Distributive Property

Simplify each expression by distributing and combining like terms.

12. $6 - 9(3m - 10)$ 13. $-4(10 - 10r) + 7$ 14. $3x + 6(7x - 5)$

15. $3(4n - 7) - 11n$ 16. $3 - 6(8v - 2)$ 17. $7(b + 2) + b$

18. $7 - 7(-8n + 2)$ 19. $-6x + 10(9 + 2x)$ 20. $8 + 2(4a - 5)$

Rewrite each polynomial in standard form and then state the degree of the polynomial.

21. $7x^2 - 4x^3 + 5x^5 - 1$

Degree = _____

22. $4x^5 - 3x^7$

Degree = _____

23. $6 - g^2 + 9g + 5g^4$

Degree = _____

Find the sum or difference. Express in standard form.

24. $(3a^2 - 4) + (5a^2 - 2)$

25. $(5k^2 + 3k - 6) - (5k^2 - 8k + 3)$

26. $(2m^2 - m + 5) + (-4m^2 + 2m - 7)$

27. $(5c^2 + 2c + 8) - (4c^2 - 5)$

28. $2(3n^2 + 2n) - (n^3 - 2n^2 + 4n + 8)$

29. $(4b^3 - 3b^2 + b) + (4b^2 - 5b + 14)$

30. $3(x^2 + 2) - (3x^2 + 5)$

31. $(d^2 + 3d) - (5d^2 - 4d + 3)$

32. $(b^3 + 2b^2) - 2(3b^2 + 5)$

33. $(4y^5 - 3y^3 + 2y) + (2y^5 + 3y^3 - 9y)$

Find each product.

34. $3x(7x^2 - x + 4)$

35. $2a(4a^6 - 2a^3 + 4)$

36. $4y^2(5y^2 + 9y - 7)$

37. $(3x + 1)(7x + 2)$

38. $(4p + 3)(3p - 9)$

39. $(2a - 5)(2a - 8)$

40. $(6x - 10)(3x + 5)$

41. $(7r + 5)(3r - 2)$

42. $(n + 8)^2$

Find each product. Express in standard form.

43. $(7x + 3)^2$

44. $(9p - 3)^2$

45. $(4w - 3)^2$

46. $(4x + 1)(8x^2 - 4x + 5)$

47. $(3k - 5)(7k^2 - k - 8)$

48. $(2x^2 + 1)(x^2 - 3x + 7)$

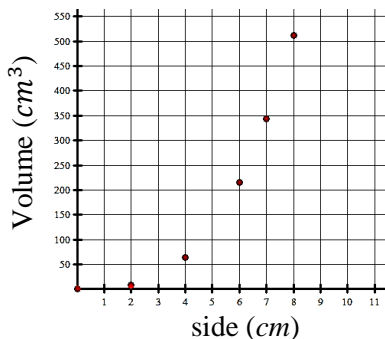49. $(3m^2 - 1)(3m^2 + 9m - 8)$

50. $(4t + 3)(8t^4 - 4t^2 + 5)$

51. $(3y - 2)(3y^6 - 11y^2 - 8)$

ANSWERS TO CORRECTIVE ASSIGNMENT

1.

Independent
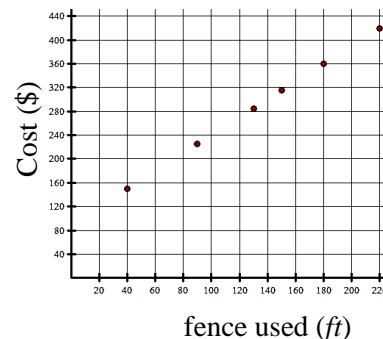s = length of each side of the cube in cm

Dependent
V = volume of the cube in cm^3

Volume (cm^3) vs side (cm)

a) When the side of the cube is 3 cm the cube's volume is 27 cm^3

2.

Independent
f = amount of fence used in ft

Dependent
c = cost of the fence in $dollars$

Cost ($) vs fence used ($ft$)

a) A 200 foot fence costs $390

3.

Independent
m = time in $minutes$

Dependent
t = temperature of the coffee in °F

time (min)	temperature (°F)
20	≈ 116
130	≈ 75
≈ 8	130
80	85

a) After 100 minutes the coffee will be 80°F

4.

Bob

time since noon (hours)	value of stocks ($)
4	120
7	100

Sarah

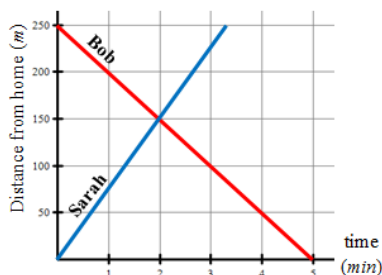| time since noon (hours)	value of stocks (#)
0	70
5	100

a) 0-3 increasing, 3-5 stayed the same, 5-7 decreasing
b) (6,110) at 6 o'clock the value of both their stocks 110 dollars
c) 80 dollars, at time zero which is 12 o'clock Bob's stock was worth $80 at noon.

5.

Bob

time (min)	Distance from home (m)
0	250
1	200
2	150

Sarah

time (min)	Distance from home (m)
0	0
1	75
2	150

a) Bob started 250 meters away. Sarah started at 0 meters away.
b) (2,150) at 2 minutes they are both 150 meters from home.
c) 5 minutes, it took 5 minutes for Bob to walk home from the library

6. True
   Commutative Property

7. True
   Associative Property

8. True
   Distributive Property

9. True
   Commutative Property

10. False

11. True
    Associative Property

12. $96 - 27m$

13. $-33 + 40r$

14. $45x - 30$

15. $n - 21$

16. $-48v + 15$

17. $8b + 14$

18. $56n - 7$

19. $14x + 90$

20. $8a - 2$

21. $5x^5 - 4x^3 + 7x^2 - 1$
    Degree = 5

22. $-3x^7 + 4x^5$
    Degree = 7

23. $5g^4 - g^2 + 9g + 6$
    Degree = 4

24. $8a^2 - 6$

25. $11k - 9$

26. $-2m^2 + m - 2$

27. $c^2 + 2c + 13$

28. $-n^3 + 8n^2 - 8$

29. $4b^3 + b^2 - 4b + 14$

30. 1

31. $-4d^2 + 7d - 3$

32. $b^3 - 4b^2 - 10$

33. $6y^5 - 7y$

34. $21x^3 - 3x^2 + 12x$

35. $8a^7 - 4a^4 + 8a$

ANSWERS TO CORRECTIVE ASSIGNMENT

36. $20y^4 + 36y^3 - 28y^2$	37. $21x^2 + 13x + 2$	38. $12p^2 - 27p - 27$
39. $4a^2 - 26a + 40$	40. $18x^2 - 50$	41. $21r^2 + r - 10$
42. $n^2 + 16n + 64$	43. $49x^2 + 42x + 9$	44. $81p^2 - 54p + 9$
45. $16w^2 - 24w + 9$	46. $3x^3 - 8x^2 + 16x + 5$	47. $21k^3 - 38k^2 - 19k + 40$
48. $2x^4 - 6x^3 + 15x^2 - 3x + 7$		49. $9m^4 + 27m^3 - 27m^2 - 9m + 8$
50. $32t^5 + 24t^4 - 16t^3 - 12t^2 + 20t + 15$		51. $9y^7 - 6y^6 - 33y^3 + 22y^2 - 24y + 16$