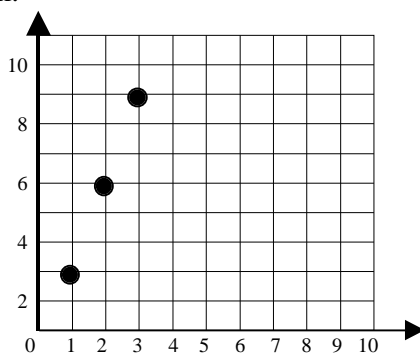


Algebraic Concepts for Middle School (6 - 8)

Answer Key and Scoring Guide

<u>Item</u>	<u>Value</u>	<u>Answer</u>
1.	(1 point)	6 or -14
2.	(1 point)	- 25°
3a.	(1 point)	12
3b.	(1 point)	- 3
3c.	(1 point)	- 4
3d.	(1 point)	54
4a.	(1 point)	4
4b.	(1 point)	- 31
5a.	(1 point)	n and y (both for credit)
5b.	(1 point)	2
5c.	(1 point)	5
6.	(.5-1 points)	b and d (.5 point each, 0 points if any incorrect response is circled)
7a.	(1 point)	expression
7b.	(1 point)	equation
7c.	(1 point)	expression
7d.	(1 point)	inequality
7e.	(1 point)	inequality
8.	(1-2 points)	Score of 1: correct equation Possible solutions: <ul style="list-style-type: none">• $\frac{j+6}{3} = b$• $(j + 6) \div 3 = b$• $\frac{12+6}{3} = b$• $(12 + 6) \div 3 = b$ Score of 1: correct solution for b b = 6 years old

9. (1 point) See diagram.



Answers to item 10 must be written as expressions. Do not accept equations or solutions using substitution.

10a. (1 point) $r - 5$

10b. (1 point) Possible solutions:

- $\frac{r+9}{2}$
- $\frac{1}{2}(r+9)$
- $(r+9) \div 2$

The answer to item 11 must be written as an **equation**.

11. (1 point) $5n = n + 12$

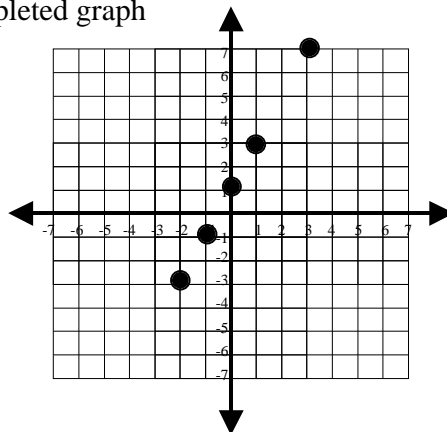
12a. (1 point) $a^2 + 2ab + b^2$

12b. (1 point) $5a + 5$

13. (1-2 points) **Score of 1:** completed t - table

n	f(n)
-2	-3
-1	-1
0	1
1	3
3	7

Score of 1: completed graph



14. (1 point) 2
15. (1 point) 1
16. (1 point) b and c (both for credit)
17. (1-2 points) One point for each correct answer.
slope: 3
y-intercept: 1
18. (1 point) $n = 10$
19. (1 point) Student responses should demonstrate an understanding of equality or balance - the idea that whatever operation is performed on one side of the equation must be performed on the other side as well.