

Name: _____

Date: _____

Score: _____ / 18

Patterns & Equations

Extending patterns, jumping to a far term, and solving for an unknown.

Rule	Far term	Unknown	Check
second term - first term	start + (n-1) × step	undo the operation	put n back in

Section A — Extend the Pattern

Write the next two terms and the rule.

1. 6, 13, 20, 27, _____, _____

2. 4, 15, 26, 37, _____, _____

3. 150, 138, 126, 114, _____, _____

4. 9, 22, 35, 48, _____, _____

5. 200, 185, 170, 155, _____, _____

6. 5, 21, 37, 53, _____, _____

Section B — Jump Ahead

Find the term without listing them all.

7. Start 4, add 6 each time. Term 12 = _____

8. Start 7, add 9 each time. Term 15 = _____

9. Start 3, add 8 each time. Term 20 = _____

10. Start 11, add 5 each time. Term 18 = _____

Section C — Addition Equations

Solve for n.

11. $n + 38 = 91$, $n =$ _____

12. $n + 47 = 120$, $n =$ _____

13. $n + 56 = 143$, $n =$ _____

14. $n + 29 = 84$, $n =$ _____

Section D — Multiplication Equations

Solve for n.

15. $7n = 91$, $n =$ _____

16. $12n = 144$, $n =$ _____

17. $9n = 153$, $n =$ _____

18. $15n = 180$, $n =$ _____

Patterns & Equations — Answer Key

For marking. Accept equivalent correct forms.

Section A — Extend the Pattern

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|--------------------|---------------------------|--------------------------|
| 1. 34, 41 (add 7) | 2. 48, 59 (add 11) | 3. 102, 90 (subtract 12) |
| 4. 61, 74 (add 13) | 5. 140, 125 (subtract 15) | 6. 69, 85 (add 16) |

Section B — Jump Ahead

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|--------|--------|--------|
| 7. 70 | 8. 133 | 9. 155 |
| 10. 96 | | |

Section C — Addition Equations

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|--------|--------|--------|
| 11. 53 | 12. 73 | 13. 87 |
| 14. 55 | | |

Section D — Multiplication Equations

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|--------|--------|--------|
| 15. 13 | 16. 12 | 17. 17 |
| 18. 12 | | |
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