# Algebra & Sequences: Medium Practice Paper 4 Answers

| Q# | Answer | Explanation |
|---|---|---|
| 1 | C | Replace n with 5: 7 × 5 − 5 = 35 − 5 = 30. |
| 2 | B | Take 6 from both sides: 5x = 35. Then divide by 5: x = 7. |
| 3 | C | The sequence goes up in 8s. From the 1st to the 15th term there are 14 steps, so 3 + 14 × 8 = 115. |
| 4 | C | pq means p × q = 8 × 3 = 24, and then 24 − 10 = 14. |
| 5 | B | The terms are 12, then (12 + 4) ÷ 2 = 8, then (8 + 4) ÷ 2 = 6, then (6 + 4) ÷ 2 = 5. |
| 6 | A | Collect the x terms: 5x + 2x = 7x. Then the y terms: 3y − y = 2y, giving 7x + 2y. |
| 7 | D | The sequence goes down in 6s, so the missing term is 38 − 6 = 32. |
| 8 | B | Add 3 to both sides: 12 = 4n. Then divide by 4: n = 3. |
| 9 | A | Area is length × width, so 3(x + 5). Multiplying each part by 3 gives 3x + 15. |
| 10 | C | For n = 14 the term is 100 − 98 = 2, which is still positive. For n = 15 it is 100 − 105 = −5, the first negative term. |
| 11 | A | The sequence goes down in 2s, so the rule contains −2n. Checking n = 1: 13 − 2 = 11, which is correct. |
| 12 | C | 3y means 3 × (−2) = −6, and then −6 + 10 = 4. |
| 13 | C | The pattern grows by 3 each time. From the 1st to the 20th there are 19 steps, so 4 + 19 × 3 = 61. |
| 14 | D | Divide both sides by 2: x − 3 = 7. Then add 3 to both sides: x = 10. |
| 15 | C | Work backwards: 22 + 8 = 30, and 30 ÷ 3 = 10. Checking, 3 × 10 − 8 = 22. |

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