**Simplifying and Substituting (H)**

Post-Intervention Assessment

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Question** | **Objective** | **RAG** |
|  1 | Expand quadratics |  |
|  2 | Factorise quadratics |   |
|  3 | Simplify algebraic fractions |   |
|  4 | Expand cubics |   |
|  5 | Use inverse and composite functions |   |

**1.** Expand and simplify (x + 5)(x + 9)

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**2**. Factorise x ² + 11x + 30

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**3.** Simplify fully $\frac{x^{2}-8x+15}{2x^{2}-7x-15}$

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**4.** Show that

(x + 1)(x + 2)(x + 5) = x³ + 8x² + 17x + 10

for all values of x.

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**5.** The functions f and g are such that

f(*x*) = 1 − 5*x*      and      g(*x*) = 1 + 5*x*

Show that gf(1) = − 19

[Glue here]