**Simplifying and Substituting (H)**

Pre-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 + 4)(x + 6)

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**2**. Factorise x ² - x - 20

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**3.** Simplify fully $\frac{2x^{2}+3x+1}{x^{2}-3x-4}$

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**4.** Show that

(x − 1)(x + 2)(x − 4) = x³ - 3x² - 6x + 8

for all values of x.

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**5.** The function f is such that

f(*x*) = 4*x* − 1

Find f−1(x)

[Glue here]