



These Gold questions require solving more complex equations and reasoning about expressions and sequences.

Name: _____ Date: _____

Section A: Solving Equations

1. If $4x - 7 = 2x + 9$, what is x ?

2. If $3(x - 2) = 15$, what is x ?

3. If $x/4 - 2 = 3$, what is x , and what is x^2 ?

4. If $2x + 3y = 16$ and $y = 2$, what is x ?

5. A number machine multiplies by 4, then subtracts 5, giving an output of 23. What was the input?

Section B: Expressions, Sequences & Reasoning

1. If $a = 4$ and $b = 3$, what is the value of $2a + 3b$?

2. Write an expression for "the sum of two consecutive numbers, if the first is n ".

3. A sequence has the rule "double the previous term, then subtract 3", starting at 4. What are the first four terms?

4. Explain why $x + x + x$ is the same as $3x$, using an example.

5. A rectangle's length is $(x + 4)$ and its width is x . If its perimeter is 28cm, what is x , and what are the rectangle's actual dimensions?
