

# Worksheet 03: Algebra Mission Codes

Solve equations and interpret variables. Show work.

## Part A: Solve for x

1.  $3x + 14 = 71$

Show your work / final answer:

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2.  $5(x - 4) = 2x + 31$

Show your work / final answer:

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3.  $\frac{2}{3}x + 8 = 26$

Show your work / final answer:

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4.  $7x - 12 = 3x + 36$

Show your work / final answer:

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5.  $4(x + 6) - 2x = 58$

Show your work / final answer:

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6. A team has  $x$  boxes. Each box has 18 items. After 27 items are removed, 153 remain. Write and solve an equation for  $x$ .

Show your work / final answer:

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Extra workspace / final response:

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## Part B: Reasoning

7. Choose one equation above and check your answer by substitution.

*Show your work / final answer:*

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8. Explain why distributing before combining like terms can make some equations easier.

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**Extra workspace / final response:**

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