Homework/Extension
Step 7: One-Step Equations

National Curriculum Objectives:

Mathematics Year 6: (6A1) Express missing number problems algebraically

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Fill in the blanks. Use of all four operations and whole numbers.
Expected Fill in the blanks. Use of all four operations and whole numbers, with some decimals and fractions.
Greater Depth Fill in the blanks. Use of all four operations with whole, decimal and negative numbers, and use of fractions.

Questions 2, 5 and 8 (Varied Fluency)
Developing Match the equation to the correct representation. Use of all four operations and whole numbers.
Expected Match the equation to the correct representation. Use of all four operations and whole numbers, with some decimals and fractions.
Greater Depth Match the equation to the correct representation. Use of all four operations with whole, decimal and negative numbers, and use of fractions.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Agree or disagree with a given statement. Use of all four operations and whole numbers.
Expected Agree or disagree with a given statement. Use of all four operations and whole numbers, with some decimals and fractions.
Greater Depth Agree or disagree with a given statement. Use of all four operations with whole, decimal and negative numbers, and use of fractions.

More Year 6 Algebra resources.

Did you like this resource? Don't forget to review it on our website.

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One-Step Equations

1. Use the given equation to fill in the blanks below.

$3 \times 8 = 4r$

A. $4r = 32 - \square$ B. $24 \div \square = r$ C. $10r = \square$

D

VF
HW/Ext

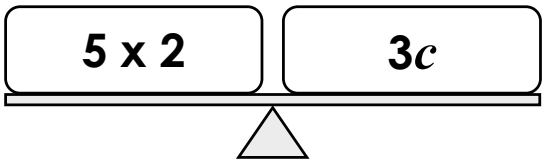
2. Match the equation to the correct representation.

A. $4c = 8$

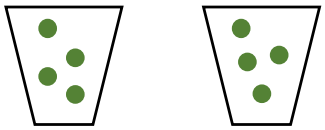
B. $5 \times 2 = 3c$

C. $2c = 8$

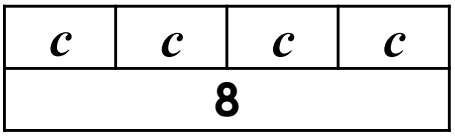
1.



2.



3.



D

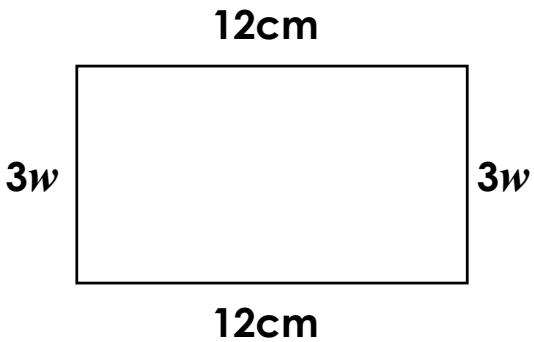
VF
HW/Ext

3. The total perimeter of the shape below is 36cm.

Tori says,



Using the measurements given, I have worked out that the value of w must be 3cm.



Not to scale

Is she correct? Explain your answer.

D

RPS
HW/Ext

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One-Step Equations

4. Use the given equation to fill in the blanks below.

$5b = 2.5 \times 4$

A. $2b = 9 -$ ☐ B. $22 \div$ ☐ $= b$ C. $10b =$ ☐

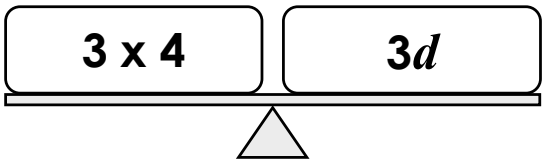
VF
HW/Ext

5. Match the equation to the correct representation.

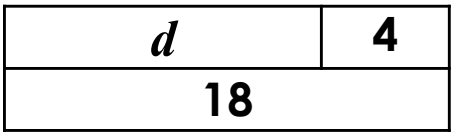
A. $3d = 12$

B. $3 \times 4 = 3d$

C. $d + 4 = 18$

1. 

2. 

3. 

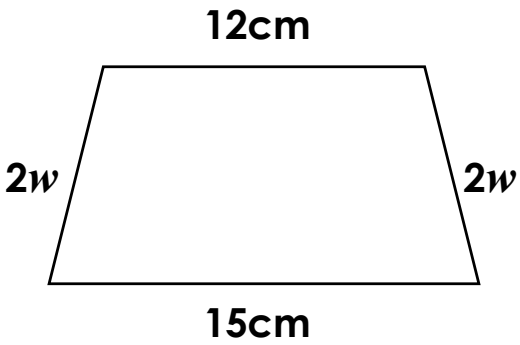
VF
HW/Ext

6. The total perimeter of the shape below is 49cm.

Alex says,



Using the measurements given, I have worked out that the value of w must be $6\frac{1}{2}$ cm.



Not to scale

Is he correct? Explain your answer.

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One-Step Equations

7. Use the given equation to fill in the blanks below.

$$7v = -1.5 + 22\frac{1}{2}$$

A. $3v = 9.5 - \square$ B. $21 \div \square = v$ C. $12v = \square$

GD

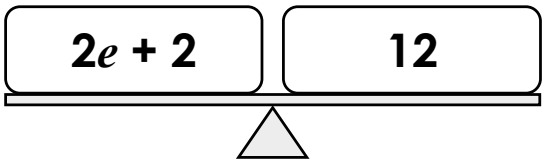
VF
HW/Ext

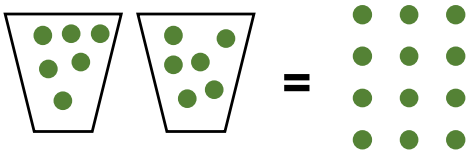
8. Match the equation to the correct representation.

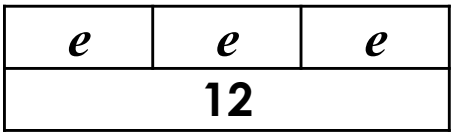
A. $2e = 12$

B. $3e = 12$

C. $2e + 2 = 12$

1. 

2. 

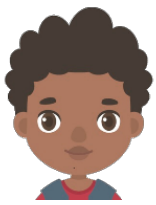
3. 

GD

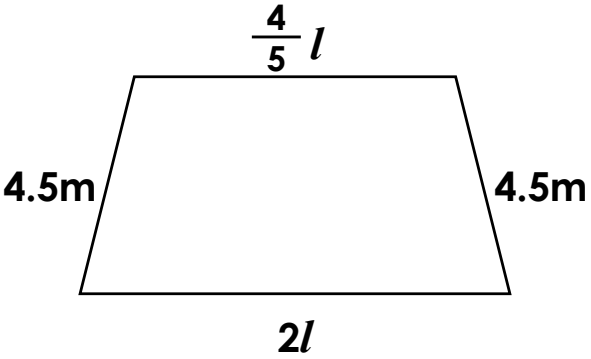
VF
HW/Ext

9. The total perimeter of the shape below is 28.6cm.

Jordan says,



Using the measurements given, I have worked out that the value of l must be 6 cm.



Not to scale

Is he correct? Explain your answer.

GD

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Homework/Extension
One-Step Equations

Developing

1. A. 8; B. 4; C. 60
2. A. 3, B. 1, C. 2
3. Tori is incorrect. The value of w is 2cm. This is because 3 x 2 = 6, and 6 + 6 + 12 + 12 = 36cm. If the value of w was 3cm, then the perimeter of the shape would total 42cm, which is incorrect.

Expected

4. A. 5, B. 11, C. 20
5. A. 2, B. 1, C. 3
6. Various answers, for example:

Alex is incorrect. The value of w is 5.5cm. This is because 2 x 5.5 = 11cm, and 11 + 11 + 12 + 15 = 49cm. If the value of w was 6.5, then the perimeter of the shape would total 53cm, which is incorrect.

Greater Depth

7. A. 0.5, B. 7, C. 36
8. A. 2, B. 3, C. 1
9. Various answers, for example:

Jordan is incorrect. The value of l is 7cm. This is because 7 x 2 = 14, and $\frac{4}{5}$ of 7 = 5.6cm, therefore 4.5 + 4.5 + 14 + 5.6 = 28.6cm. If the value of l was 6, then the perimeter of the shape would total 25.8cm, which is incorrect.

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