

Algebra - simple formula (1)

Examples

$$7c = 35 \quad 35 \div 7 = 5 \quad c=5$$

$$b/7 = 4 \quad 7 \times 4 = 28 \quad b=28$$

Practise

Work out what the letter is worth in each number sentence:

1) $5a = 20$

2) $6b = 18$

3) $17 + a = 22$

4) $3a = 15$

5) $5b = 10$

6) $63 = 9c$

Fluency

Work out what the letter is worth in each number sentence:

1) $n/5 = 30$

2) $2n/5 = 30$

3) $3n - 4 = 20$

4) $n = 12 + 14$

5) $2n = 4 + 20$

6) $n/2 = 20$

Reasoning

1) Helen says "If there is a number before a letter, you multiply e.g. $5b$. If there is a number after a letter you divide e.g. a^2 " Is she correct?

2) Kat substitutes $b = 3$ into the formula $4b + 5$. She gets the answer 17. Is she correct? Explain your answer.

3) Steve substitutes $b = 3$ into the formula $4b + 5$. He gets the answer 48. Explain the mistake he has made.

4) Henry substitutes $b = 5$ into the formula $3b + 3$. He gets the answer 18. Is he correct? Explain your answer.

Problem Solving Challenge

1) 7 pears and 1 banana cost 57p.

3 bananas, 1 pear and 2 apples cost 41p.

1 pear, 2 apples and 2 bananas cost 33p.

How much does each piece of fruit cost?

Algebra simple formula - Answers

Practise

Work out what the letter is worth in each number sentence:

- 1) 4
- 2) 3
- 3) 5
- 4) 5
- 5) 2
- 6) 7

Fluency

Work out what the letter is worth in each number sentence:

- 1) 150
- 2) 75
- 3) 8
- 4) 26
- 5) 12
- 6) 40

Reasoning

- 1) She is partly correct as her first statement is correct but the second one means squared so you would multiply the number by itself.
- 2) Yes - explanation may vary but should show they have tested the calculation
- 3) He has put 3 in b's place and made $43 + 5$
- 4) Yes - explanation shows they checked the calculation

Problem Solving

1) $7p + 1b = 57$

$3b + 1p + 2a = 41$

$1p + 2a + 2b = 33$

Banana = $8p$

Pear = $7p$

Apple = $5p$