Topic test | Algebra

Algebra - practice test 1

Name: _____ Date: _____

16 questions | 37 marks | 55 minutes

Simplify, expand, factorise and use formulas, with reasoning and checks.

No calculator needed.

1. Simplify $6x + 3x$. [1 mark]

2. Simplify $8a - 5 + 2a + 9$. [2 marks]

3. Simplify $4p - 7q - 9p + 2q$. [2 marks]

4. Simplify $3x^2 \times 4x$. [2 marks]

5. Expand $4(y + 6)$. [2 marks]

6. Expand $-3(2x - 5)$. [2 marks]

7. Simplify $2(3a + 4) + 5a$. [2 marks]

8. Fully factorise $12x + 18$. [2 marks]

9. Fully factorise $10p^2 - 15p$. [2 marks]

10. Evaluate $3x^2 - 2y$ for $x = -2$ and $y = 5$. [2 marks]

11. Make a the subject of $F = ma$, where $m \neq 0$. [2 marks]

12. Make x the subject of $y = 4x + 7$. [3 marks]

13. A rectangle has length $(x + 5)$ cm and width 4 cm. Simplify its perimeter. [3 marks]

14. Show $3(2t+1)-t$ and $5t+3$ are equivalent. [3 marks]

15. A student writes $-2(x-4)=-2x-8$. Correct the error. [3 marks]

16. A taxi fare is $C=5+3d$ dollars for d kilometres. [4 marks]

(a) Make d the subject. [2 marks]

(b) Find the distance when the fare is 32 dollars. [2 marks]