

# Topic Test 3 (20 minutes)

## Basic algebra - Foundation

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1 Work out the value of  $24 + 4 \times 3^2$

[1 mark]

Answer \_\_\_\_\_

2 (a) Simplify  $6 \times 2 \times d \times d \times e$

[1 mark]

Answer \_\_\_\_\_

2 (b) Write as a single fraction in its simplest form  $(5 \times g \times g \times g) \div (8 \times h \times h)$

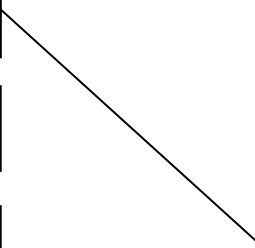
[2 marks]

Answer \_\_\_\_\_

- 3 Match each card on the left with a card on the right.  
The first one is done for you.

[2 marks]

|                              |            |
|------------------------------|------------|
| 5 more than $n$              | $n - 5$    |
| Double $n$                   | $2n + 1$   |
| 5 less than $n$              | $n + 5$    |
| $n$ squared                  | $2(n + 1)$ |
| Double $n$ then add 1        | $n^2$      |
| Add 1 then double the answer | $2n$       |



- 4 Andrew pays  $\pounds p$  for his phone.  
Liz pays 3 times as much as Andrew.  
Laura pays  $\pounds 20$  less than Liz.

Write an expression for the total they pay.  
Simplify your answer.

[3 marks]

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Answer  $\pounds$  \_\_\_\_\_

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**5** Factorise fully each of the following expressions

**5 (a)**  $20a + 16$

[1 mark]

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Answer \_\_\_\_\_

**5 (b)**  $30b - 45$

[1 mark]

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Answer \_\_\_\_\_

**5 (c)**  $16c^3 + 24c$

[2 marks]

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Answer \_\_\_\_\_

**5 (d)**  $18d^3e - 27d^5e$

[2 marks]

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Answer \_\_\_\_\_

**END OF QUESTIONS**