2.7 Writing an Expression: 30-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Write down an expression for each of the following.

(a) m increased by 9 **(1)**

.....

(b) multiply w by 7 **(1)**

.....

(Total for Question 1 is 2 marks)

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2 Write down an expression for each of the following.

(a) t decreased by 4 **(1)**

.....

(b) the product of 8 and w **(1)**

.....

(Total for Question 2 is 2 marks)

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3 Write down an expression for t reduced by 5.

(Total for Question 3 is 1 mark)

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4 There are e eggs in each box.

(a) Write an expression, in terms of e, for the total number of eggs in 6 boxes. **(1)**

(b) Priti buys 6 boxes of eggs. On the way home, 4 eggs crack and have to be thrown away. Write an expression, in terms of e, for the number of eggs Priti has left. **(1)**

(Total for Question 4 is 2 marks)

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5 Write down an expression for each of the following.

(a) 8 subtracted from k **(1)**

(b) n divided by 4 **(1)**

(Total for Question 5 is 2 marks)

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6 Write an expression for the product of 4 and a number p.

(Total for Question 6 is 1 mark)

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7 Write an expression for a number a decreased by 7.

(Total for Question 7 is 1 mark)

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8 A car park has c cars in it. 9 more cars arrive. Write down an expression for the number of cars in the car park now.

(Total for Question 8 is 1 mark)

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9 A box contains 8 chocolates. Write down an expression for the number of chocolates in k boxes.

(Total for Question 9 is 1 mark)

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10 Olamide has s pounds in her bank account. She withdraws £15. Write down an expression for the amount left in her account.

(Total for Question 10 is 1 mark)

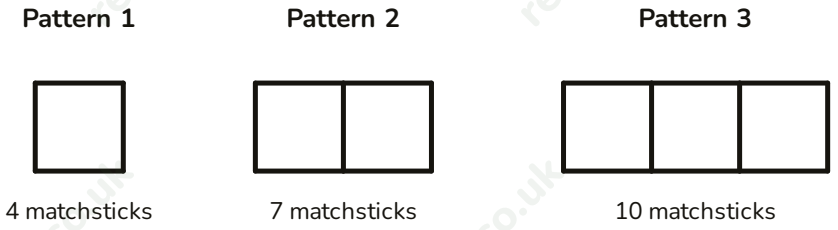
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11 A farm has c chickens and w cows. Each chicken has 2 legs and each cow has 4 legs. Write an expression, in terms of c and w, for the total number of legs on the farm.

(Total for Question 11 is 2 marks)

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12 Kwame makes patterns from matchsticks. Pattern 1 is 1 square made from 4 matchsticks. Pattern 2 is 2 squares in a row made from 7 matchsticks. Pattern 3 is 3 squares in a row made from 10 matchsticks, because each new square after the first only needs 3 extra matchsticks (one matchstick is shared with the square before it).



Diagrams not drawn accurately

(a) Work out the number of matchsticks needed for Pattern 4. **(1)**

.....

(b) Write an expression, in terms of n, for the number of matchsticks needed for Pattern n. **(2)**

(Total for Question 12 is 3 marks)

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13 A row of n tiles is laid end to end. Each tile is x cm long. There is a 2 cm gap between each pair of adjacent tiles. Write an expression for the total length, in cm, of the row of n tiles. Simplify your answer.

(Total for Question 13 is 3 marks)

14 A market stall charges a fixed rental fee plus an amount per hour. The table shows the total charge for different numbers of hours.

Hours (h)	Total charge (pounds)
1	15
2	20
3	25

Work out an expression, in terms of h, for the total charge in pounds. Simplify your answer.

(Total for Question 14 is 2 marks)

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Mark scheme · 2.7 Writing an Expression: 30-minute Pack

Question 1

(a) m + 9 oe **B1**

(a) Answer: m + 9

(b) 7w oe **B1**

(b) Answer: 7w

Question 2

(a) t - 4 oe **B1**

(a) Answer: t - 4

(b) 8w oe **B1**

(b) Answer: 8w

Question 3

t - 5 oe (not 5 - t) **B1**

Answer: t - 5

Question 4

(a) 6e oe **B1**

(a) Answer: 6e

(b) 6e - 4 oe **B1**

(b) Answer: 6e - 4

Question 5

(a) k - 8 oe (not 8 - k) **B1**

(a) Answer: k - 8

(b) n/4 oe **B1**

(b) Answer: n/4

Question 6

4p cao **B1**

Answer: 4p

Question 7

a - 7 cao **B1**

Answer: a - 7

Question 8

c + 9 cao (oe 9 + c) **B1**

Answer: c + 9

Question 9

8k cao (oe k x 8) **B1**

Answer: 8k

Question 10

s - 15 cao **B1**

Answer: s - 15

Question 11

2c or 4w identified (oe) **M1**

2c + 4w oe **A1**

Answer: 2c + 4w

Question 12

(a) 13 **B1**

(a) Answer: 13

(b) 3n identified (oe common difference used) **M1**

(b) 3n + 1 oe **A1**

(b) Answer: 3n + 1

Question 13

identify tile contribution nx or n x **M1**

identify gap contribution 2(n - 1) or equivalent **M1**

nx + 2n - 2 cao **A1**

Answer: nx + 2n - 2

Question 14

identify the rate of increase as £5 per extra hour and the fixed fee as £10 (charge - 5h), from the pattern in the table **M1**

10 + 5h cao (oe 5h + 10) **A1**

Answer: 10 + 5h

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