2.5 Simplifying and Collecting Like Terms: 30-minute Pack

Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Simplify and collect like terms after expanding. Show your method.

(a) Simplify $2(x + 3) + x$ **(2)**

2 Simplify each expression that mixes multiplication and addition.

(a) Simplify $4(x + 1) + 2x$ **(3)**

3 Collect like terms and simplify. Some coefficients are negative.

(a) Simplify $-2x + 5x - 3 + 7$ **(3)**

4 Simplify and write in simplest form. Combine like terms and simplify products.

(a) Simplify $2(x + 2) + 3(x - 1)$ **(3)**

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5 Simplify $8m^2$ x 8mb.

(2)

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6 Write each of these in a simpler form, without multiplication or division signs where possible.

(a) m ÷ 6

(b) m x y x 6

(2)

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7 Here is an expression: -z - b + 1

(a) Write down the constant term.

(b) Write down the coefficient of b.

(2)

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8 Simplify each single-term combination.

(a) Simplify -2m + 7m **(1)**

(b) Simplify 4p - 9p **(1)**

(c) Simplify 0 + 6t **(1)**

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9 Is -7n - 3q + 4 an expression, an equation or a formula? Give a reason.

(2)

10 State whether 4x and 4y are like terms. Give your answer as yes or no.

(1)

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Mark scheme · 2.5 Simplifying and Collecting Like Terms: 30-minute Pack

Question 1

(a) expand 2(x+3) -> 2x + 6 and then collect with + x	M1
(a) 3x + 6 cao	A1

(a) Answer: **3x + 6**

Question 2

(a) expand 4(x+1) -> 4x + 4	M1
(a) collect like terms 4x + 2x	M1
(a) 6x + 4 cao	A1

(a) Answer: **6x + 4**

Question 3

(a) collect x terms and constant terms separately	M1
(a) compute -2x + 5x = 3x and -3 + 7 = 4	M1
(a) 3x + 4 cao	A1

(a) Answer: **3x + 4**

Question 4

(a) expand both brackets: 2x+4 and 3x-3	M1
(a) collect like terms: 2x + 3x and 4 - 3	M1
(a) 5x + 1 cao	A1

(a) Answer: **5x + 1**

Question 5

multiplies (or divides) the numbers correctly or the letters correctly	M1
$64m^3b$ cao	A1

Answer: **$64m^3b$**

Question 6

(a) m/6	B1
(b) 6my	B1

Answer: **(a) m/6, (b) 6my**

Question 7

(a) 1	B1
(b) -1	B1

Answer: **(a) 1, (b) -1**

Question 8

(a) 5m cao	B1

(a) Answer: **5m**

(b) -5p cao	B1

(b) Answer: **-5p**

(c) 6t cao	B1

(c) Answer: **6t**

Question 9

Expression	B1
reason: no equals sign	B1

Answer: **Expression, because it has no equals sign**

Question 10

No, because the letters are different	B1

Answer: **No**

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