

## Short Assessment

Time Allowed: 25 minutes

Total Marks: 26

1. Given that,

$$p = \frac{ab - c^2}{3d}$$

find  $p$ , if  $a = -4$ ,  $b = 9$ ,  $c = 3$  and  $d = 2$ .

$$\begin{aligned} p &= \frac{-4 \times 9 - 3^2}{3 \times 2} \\ &= \frac{-36 - 9}{6} \\ &= \frac{-45}{6} \\ &= -\frac{15}{2} // \end{aligned}$$

(2 marks)

2. Simplify the following expressions.

(a)  $4x - 12 - 3y + 8 - 5x - 6y$

$$\begin{aligned} &= 4x - 5x - 3y - 6y - 12 + 8 \\ &= \underline{\underline{-x - 9y - 4}} \end{aligned}$$

(1 mark)

(b)  $2a^2 - 6b^2 + 4ab - 5a^2 - 2b^2 - 7ab$

$$\begin{aligned} &= 2a^2 - 5a^2 - 6b^2 - 2b^2 + 4ab - 7ab \\ &= \underline{\underline{-3a^2 - 8b^2 - 3ab}} \end{aligned}$$

(2 marks)

3. Simplify,

$$(a) \quad 4x^3 \times 6x^5 = \underline{\underline{24x^8}}$$

(1 mark)

$$(b) \quad \frac{6a^5}{3a^2} = \underline{\underline{2a^3}}$$

(1 mark)

4. Expand the brackets and simplify,

$$(a) \quad 5(x-y) + 2(x+y) = 5x - 5y + 2x + 2y \\ = \underline{\underline{7x - 3y}}$$

(2 marks)

$$(b) \quad 3(5a-2b) - 2(3a-4b) = 15a - 6b - 6a + 8b \\ = \underline{\underline{9a + 2b}}$$

(2 marks)

$$(c) \quad 4x(3x-7) - 5x(2x+3) = 12x^2 - 28x - 10x^2 - 15x \\ = \underline{\underline{2x^2 - 43x}}$$

(2 marks)

$$(d) \quad 3a(a-5) - (4a^2 - 8a) + 7a - 5 \\ = 3a^2 - 15a - 4a^2 + 8a + 7a - 5 \\ = \underline{\underline{-a^2 - 5}}$$

(2 marks)

(e)  $(2x - 3)(5x + 4)$

$$= 10x^2 + 8x - 15x - 12$$

$$= \underline{\underline{10x^2 - 7x - 12}}$$

(2 marks)

(f)  $(2 - 5p)(3p - 2)$

$$= 6p - 4 - 15p^2 + 10p$$

$$= \underline{\underline{-15p^2 + 16p - 4}}$$

(2 marks)

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5. Solve the following equations. No marks will be given for trial and improvement method.

(a)  $2x - 3 = 6x - 11$

$$11 - 3 = 6x - 2x$$

$$8 = 4x$$

$$\frac{8}{4} = x$$

$$\underline{\underline{x = 2}}$$

(1 mark)

(b)  $4(2x + 5) = 5x - 2(3x - 12)$

$$8x + 20 = 5x - 6x + 24$$

$$8x = -x + 24 - 20$$

$$8x = -x + 4$$

$$9x = 4$$

$$x = \frac{4}{9} //$$

(3 marks)

(c)  $(x - 2)(x - 4) = (x - 3)(x - 5)$

$$\cancel{x^2} - 4x - 2x + 8 = \cancel{x^2} - 5x - 3x + 15$$

$$-6x + 8 = -8x + 15$$

$$8x - 6x = 15 - 8$$

$$2x = 7$$

$$x = \underline{\underline{3.5}}$$

(3 marks)

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**- End of Test -**