



# SEKOLAH BUKIT SION

1<sup>ST</sup> Sem, AY 2016 – 2017 ... where the abundance in life flows!

## CHAPTER TEST: FUNDAMENTAL ALGEBRA II



NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

CLASS: \_\_\_\_\_

MR EMMAN RECANEL

1. Factorise the following completely:

Given:	Answer:	Marks
(a) $10x - 45y$		[1]
(b) $-4ab - 30bc + 14bd$		[1]
(c) $3kmn + 27mn - 15mnp$		[1]
(d) $2x^8y^4 + 4x^6y^5 - 8x^4y^3 - 10x^3y^6$		[1]
(e) $2\pi r^2 + 2\pi rh$		[1]

2. Factorise the following completely:

Given:	Answer:	Marks
(a) $3q(2p - 3) + 7(2p - 3)$		[1]
(b) $6(x - 3y) - z(3y - x)$		[1]
(c) $(3h - 1) + 5c(3h - 1) - b(3h - 1)$		[1]

3. Factorise  $14w(1 - 4u) - 1 + 4u$ .

Answer: \_\_\_\_\_ [2]

4. Factorise and simplify  $(a + b)(2g - h) - (3h + 2)(a + b)$ .

Answer: \_\_\_\_\_ [3]

5. (a) Factorise  $x^2 - 3x$ .

Answer: \_\_\_\_\_ [1]

(b) Factorise  $3x - 9$ .

Answer: \_\_\_\_\_ [1]

Hence, simplify  $\frac{x^2 - 3x}{3x - 9}$ .

Answer: \_\_\_\_\_ [1]

6. (a) Factorise  $a^2 - ab - ac + bc$ .

Answer: \_\_\_\_\_ [2]

(b) Factorise  $a^2 + ab - ac - bc$ .

Answer: \_\_\_\_\_ [2]

Hence, simplify  $\frac{a^2 - ab - ac + bc}{a^2 + ab - ac - bc}$ .

Answer: \_\_\_\_\_ [1]

7. Factorise the following completely.

(a)  $ab + 4a + 3b + 12$

(c)  $x^2 + xy - 3x - 3y$

Answer: \_\_\_\_\_ [2]

Answer: \_\_\_\_\_ [2]

(b)  $6bc - 2bd - 4ad + 12ac$

(d)  $x^3 - x^2 - 1 + x$

Answer: \_\_\_\_\_ [3]

Answer: \_\_\_\_\_ [2]

8. Solve the following algebraic fractions.

(a)  $\frac{x}{2} + \frac{x-4}{2}$

(d)  $\frac{8p-12}{5} - \frac{2+5p}{5}$

Answer: \_\_\_\_\_ [2]

Answer: \_\_\_\_\_ [2]

(b)  $\frac{2x+3y}{9} + \frac{5y-16}{3}$

(e)  $\frac{3x-7}{6} - \frac{6-5x}{4} + 2x$

Answer: \_\_\_\_\_ [3]

Answer: \_\_\_\_\_ [3]

(c)  $\frac{a-1}{4} - \frac{a-2}{3} - \frac{a-3}{2}$

(f)  $\frac{2(y+1)}{5} - \frac{3(2+3y)}{8}$

Answer: \_\_\_\_\_ [3]

Answer: \_\_\_\_\_ [3]

9. Show that  $\frac{x(x^2+2x-1)}{3} - \frac{x^2(8x-5)}{6} - \frac{x(10-8x^2)}{12}$  simplifies to  $\frac{-x(2x^2-9x+7)}{6}$ . [4]

- END OF TEST -