



## NALANDA COLLEGE - COLOMBO 10

### Grade 11 Mathematics Unit Test

#### 7) Algebraic Fraction

1. Find the L.C.M of  $5ab$ ,  $10a^2b$  and  $2ab^2$
2. Find the L.C.M. of  $3a + b$  and  $2a - 4$
3. Find the L.C.M. of  $(x - 3)$ ,  $(x^2 - 9)$  and  $x^2 - x - 6$ .
4. Find the L.C.M. of  $x^2$ ,  $3(x - y)$  and  $(y - x)$ .
5. Find the L.C.M. of  $(x - 2)$ ,  $x^2 + 5x + 6$  and  $x^2 - 4$
6. Simplify.  $\frac{x+3}{4} + \frac{2x-1}{3}$
7. Simplify.  $\frac{5}{2x+1} - \frac{2x+4}{2x-1}$
8. Simplify.  $\frac{3n}{m^2} - \frac{4}{5m}$
9. Simplify.  $\frac{5}{a+3} - \frac{3}{a+2}$
10. Simplify.  $\frac{5}{1-x} + \frac{3}{x-1}$
11. Simplify.  $\frac{1}{x-3} + \frac{1}{x^2-x-6}$
12. Simplify.  $\frac{2}{a-1} + \frac{3}{a+1} - \frac{1}{a^2-1}$
13. Multiply and represent the answer in the simplest form.  
 $\frac{9}{x} \times \frac{2}{18x}$
14. Multiply.  $\frac{a^2}{3b+2} \times \frac{9b+6}{a}$
15. Multiply.  $\frac{a-9}{a+2} \times \frac{a^2+3a+2}{(a+3)}$
16. Simplify.  $\frac{a^2-81}{a+9} \times \frac{a^2+3a+2}{(a-9)}$
17. Simplify.  $\frac{a^2-25}{a^2-9} \div \frac{a+5}{a+3}$
18. Simplify.  $\frac{a(a+b)}{a^2-b^2} \div \frac{(a+b)^2}{a-b}$
19. Simplify.  $\frac{1}{(a-3)} + \frac{1}{(a+3)}$
20. Simplify.  $\frac{2}{x-y} + \frac{1}{y-x}$