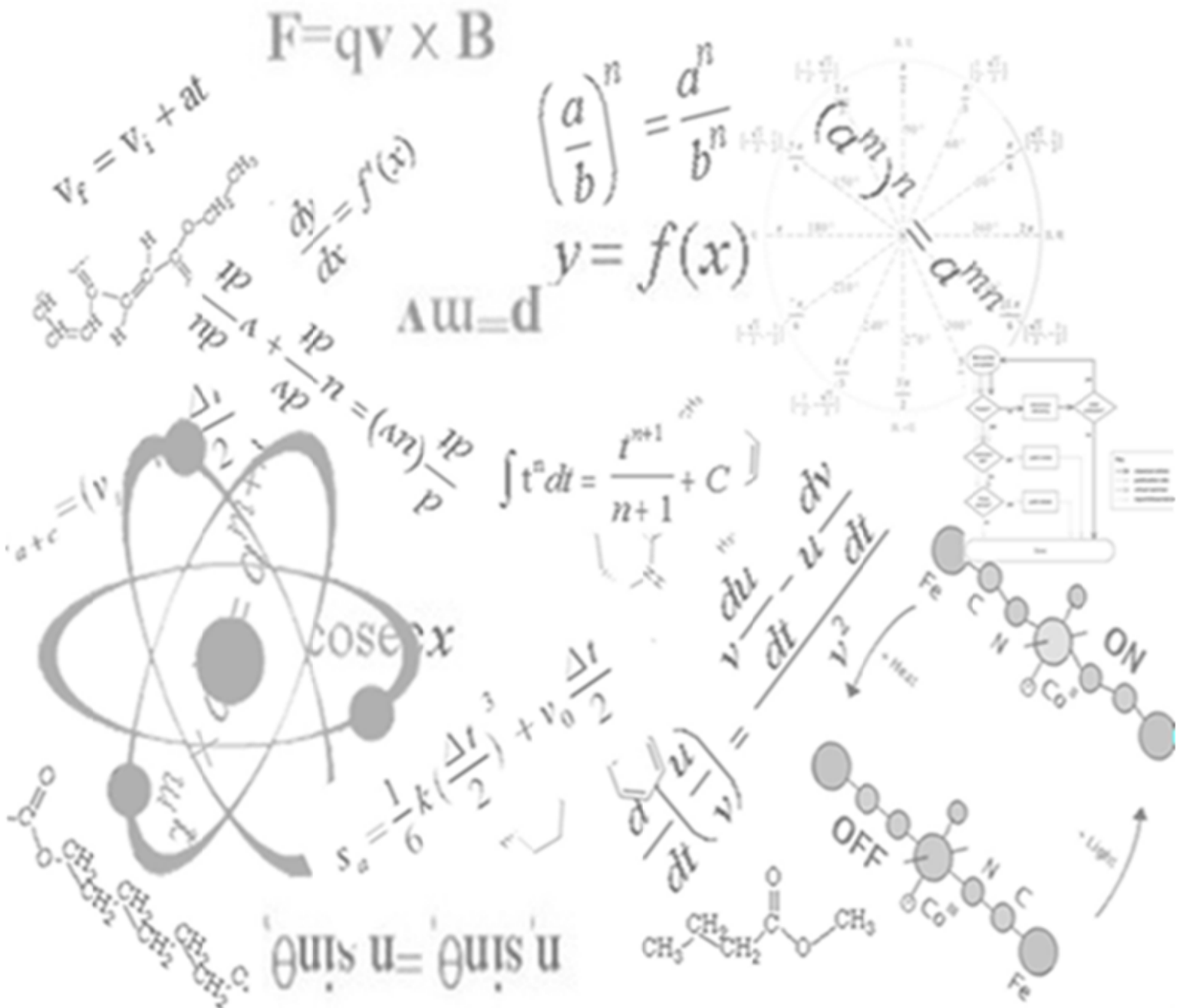


where students come first!



Year 11- Mathematics Advanced
Basic Algebra and Arithmetic



Basic Algebra and Arithmetic: Exam /21

1. (2 marks)

Find integers a and b such that: $\frac{3}{\sqrt{3}-6} = \frac{-\sqrt{a}-b}{11}$

2. (2 marks)

Calculate $\frac{9.453^3}{\sqrt{(7.51789)^2}}$ to 3 significant figures

3. (2 marks)

Simplify $\frac{15}{3^{4x} \times 9^{1-\frac{4x}{3}}}$

4. (1 marks)

Simplify $\sqrt{980} - \sqrt{720}$

5. (2 marks)

write 0.05 as a fraction

6. (2 marks)

Simplify $\frac{\sqrt{18}-\sqrt{36}}{\sqrt{6}}$

7. (2 marks)

Solve $|8 - 6x| = 5$

8. (2 marks)

Solve $\frac{3x-2}{6x-2} = \frac{3x-1}{6x+1}$

9. (3 marks)

Find the values of x and y that satisfy the simultaneous equations:

$$y=21x^2 \quad \text{and} \quad y=-13x-2$$

10. (3 marks)

After a discount of 70% on a kitchen appliance the price is \$306. Find the cost of buying this appliance with no discount.