



# Mental Computation

## Year 10 Mathematics

End Term 1

### Mental computation (End Term 1)

- 1 Spell Factorisation.
- 2 Simplify:  $\sqrt{12}$
- 3 Simplify:  $4^{\frac{3}{2}}$
- 4 What is the formula for the area of a circle?
- 5 What is the formula for the volume of a cylinder?
- 6 Solve:  $2x - 5 < 3$
- 7 Solve:  $x + y = 9$ ,  $x - y = 1$
- 8  $^{-}2 - ^{-}8$
- 9  $(x^{-3})^2$
- 10 Simplify:  $\frac{x}{4} + \frac{2x}{4}$

$$\begin{aligned} 9^{\frac{3}{2}} &= (\sqrt[2]{9})^3 \\ &= 3^3 \\ &= 27 \end{aligned}$$

The sum of two numbers is 9  
Their difference is 1.  
What are the two numbers?

Sample 1

### Mental computation (End Term 1)

- 1 Spell Linear Equation.
- 2 Simplify:  $\sqrt{18}$
- 3 Simplify:  $16^{\frac{3}{2}}$
- 4 What is the formula for the area of a rectangle?
- 5 What is the formula for the volume of a rectangular prism?
- 6 Solve:  $3x - 2 < 4$
- 7 Solve:  $x + y = 10$ ,  $x - y = 4$
- 8  $^{-}5 - ^{-}6$
- 9  $x^3 \div x^2$
- 10 Simplify:  $\frac{3x}{5} + \frac{x}{5}$

Sample 2

### Mental computation (End Term 1)

- 1 Spell Right Pyramid.
- 2 Simplify:  $\sqrt{27}$
- 3 Simplify:  $8^{\frac{2}{3}}$
- 4 What is the formula for the area of a triangle?
- 5 What is the formula for the volume of a triangular based prism?
- 6 Solve:  $2x - 3 > 3$
- 7 Solve:  $x + y = 13$ ,  $x - y = 9$
- 8  $^{-}5 - 3$
- 9  $x^{-3} \times x^2$
- 10 Simplify:  $\frac{2x}{6} + \frac{3x}{6}$

Sample 3