Numeracy Year 9 – Week 6: Number

STUDENT WORKSHEET

■ **Focus of the week**

Indices and scientific notation

Question 1

John has these four number cards.

Shade one bubble.

2^6 6^2 3^4 4^3

Which two cards show numbers with the same value?

3^4 and 4^3 3^4 and 6^2 2^6 and 6^2 2^6 and 4^3

○   ○   ○   ○

Question 2

The amount of energy, E units, used by an air-conditioner for temperatures in the range $20°C$ to $30°C$ is given by the rule

$E = 2T^2$ where T is the temperature in $°C$.

How many units of energy are used when the temperature is $25°C$? _____ units

Question 3

Let $d^3 = T^2$.

Find d when $T = 8$.

d = _____

Challenge Question

$8.345 × 10^3 + 3.25 × 10^{-1} − 6.58 × 10^{-2}$

a) In the expression above, write each number as a common numeral and then evaluate the expression;
b) Check your answer, with your calculator, by entering the numbers in a scientific form.