

MATH – PLAP 8th – Week 2

7 marks from 7 questions

Question 1

$$x = \sqrt[3]{64}$$

$$y = \sqrt{x}$$

$$y = \boxed{}$$

Question 2

$$3^3 \times 5^3 = 3375$$

Use this fact to find the cube root of 3375.

$$\boxed{}$$

Question 3

Is the following statement true or false?

The square root of a rational number is always an integer.

- a. True
- b. False

Question 4

Which two numbers are missing from the sequence:

1024, ..., 256, 128, ..., 32, 16, 8, 4, 2, 1?

- a. ☐ 2^8 and 2^6
- b. ☐ 2^9 and 2^5
- c. ☐ 2^8 and 2^5
- d. ☐ 2^9 and 2^6

Question 5

The first three terms of a number sequence are {1, 3, 27}. The sequence is built up in the following way:

$$\text{Term 1} = 3^0$$

$$\text{Term 2} = 3^0 \times 3^1$$

$$\text{Term 3} = 3^0 \times 3^1 \times 3^2$$

The fourth term of the sequence is $\boxed{}$.

Question 6

$$6^3 \div 6^3 =$$

- a. ☐ $6^1 = 6$
- b. ☐ $6^0 = 1$
- c. ☐ $6^6 = 46\,656$
- d. ☐ $6^9 = 10\,077\,696$

Question 7

Enter the missing index.

$$4^8 \times 4^5 \div 4^6 = 4^{\boxed{}}$$