Topic Test 1 (20 minutes)

Indices - Foundation

Section A

10 minutes. Calculator.

1 What whole number power of 2 is 1024?

[1 mark]

Answer _____

2 Circle the number that is a power of 7

[1 mark]

14 77 343 490

3 Use your calculator to work out

3 (a) $\dfrac{\sqrt{33.64}}{19.8+9.2}$

[1 mark]

Answer _____

3 (b) How much less than 1000 is 9.8^3?

[1 mark]

Answer _____

4 Work out $\dfrac{2^7 \times 3^5}{6^3}$

[1 mark]

Answer _____

5 (a) Write $11^{20} \div 11^4$ as a single power of 11

[1 mark]

Answer _____

5 (b) Write 4^5 as a single power of 2

[1 mark]

Answer _____

6 Write 91 as the sum of two cube numbers.

[1 mark]

Answer _____

7 Raj and his sister Zia are both at secondary school.
Raj is three years older than Zia.
The sum of the squares of their ages is 369

How old are they?

[2 marks]

Zia = _____ years old

Raj = _____ years old

Section B

10 minutes. Non-calculator. Put your calculator away. You may still work on section A but you must **not** use a calculator.

8 Circle the number that is 1 **more** than a cube number

[1 mark]

10 26 37 65

9 Circle the number that is **not** a whole number power of 3

[1 mark]

9 18 27 81

10 Write down the value of $\sqrt{196}$

[1 mark]

Answer _____

11 Work out $\sqrt{2^4 + 3^2}$

[2 marks]

Answer _____

12 Write $\sqrt{1\text{million}}$ as a power of 10

[1 mark]

Answer _____

13 Solve the equation $x^2 - 1 = 48$

[2 marks]

Answer _____

14 Tina says,

"The difference between any 2 consecutive square numbers is **always** odd."

Is she correct?

Yes ☐ No ☐

Give reasons for your answer.

[2 marks]