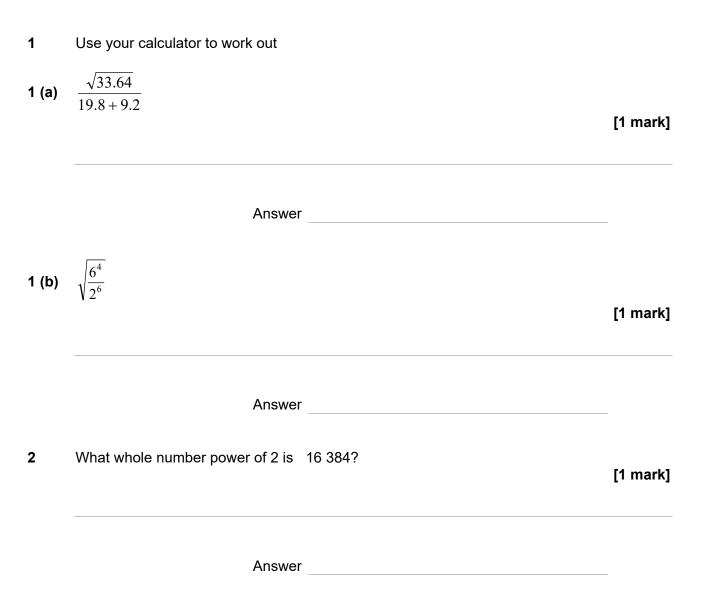


Topic Test 1 (20 minutes)

Indices - Higher

Section A

10 minutes. Calculator.



	$x^{x} \times 3^{x} = 1296$	
V	Vork out the value of <i>x</i>	[1 mark]
V	Answer Vork out $\left(\frac{2^7 \times 3^5}{6^3}\right)^{\frac{1}{2}}$	
		[1 mark
	Answer	
R	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	
R T	Raj is three years older than Zia.	[2 marks]

Raj = _____ years old

6 (a)	Write $\frac{11^{13} \times 11^3}{11^7}$ as a single power of 11	[1 mark]
6 (b)	Answer Write (4 ³) ⁵ as a single power of 2	[1 mark]
7	Answer Write 224 as the sum of two cube numbers.	[1 mark]
	Answer	
10 mii	tion B nutes. Non-calculator. Put your calculator away. You may still work on section A but se a calculator.	t you must
8	Estimate the square root of 90	[1 mark]
9	Answer Between which two integers does the cube root of 80 lie?	[1 mark]
	Answer	_

	as a power of 10		[1 ma
	Answer _		
Solve the equatio	n x ² – 1 = 48		[2 mar
	Answer		
Tina says,			
	rence between any :	2 consecutive square nu	mbers is always odd."
Is she correct? Ye	s	No	
Give reasons for	your answer.		
			[2 mai

Estimate the value of <i>x</i>	when 3" - 25		[1
	Answer		
a and b are whole num	bers greater than 1.		
	bers greater than 1. pairs of values for a and b for	or which $a^b = 64$	[2 n
	-	or which $a^b = 64$	[2 m
Work out two different	pairs of values for <i>a</i> and <i>b</i> for		
Work out two different	pairs of values for a and b for		
Work out two different	pairs of values for <i>a</i> and <i>b</i> for		
Work out two different	pairs of values for <i>a</i> and <i>b</i> fo		
Work out two different	pairs of values for a and b for		