

Indices 2 Answers

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|----|--|--|---|
| 1) | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 8 </div> <div style="width: 45%;"> (a) 10

 (b) 9 </div> </div> | | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"> 1

 1 </div> </div> |
| 2) | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 9 </div> <div style="width: 45%;"> $4x^{-24}$ or $\frac{4}{x^{24}}$ </div> </div> | | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 2 </div> <div style="width: 45%;"> B1 $4x^n$ B1 $\frac{k}{x^{24}}$ or kx^{-24} for any numerical k, n </div> </div> |
| 3) | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 9 </div> <div style="width: 45%;"> (a) a^5

 (b) 0.04 or $\frac{1}{25}$ </div> </div> | | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 1

 1 </div> <div style="width: 45%;"></div> </div> |
| 4) | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 9 </div> <div style="width: 45%;"> (a) 1

 (b) b^{-2} </div> </div> | | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 1

 1 </div> <div style="width: 45%;"> accept $\frac{1}{b^2}$ </div> </div> |
| 5) | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 18 </div> <div style="width: 45%;"> (a) 5^{-2} and 0.2^2

 (b) (i) a^9
 (ii) $4b^{12}$ </div> </div> | | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 2

 1

 2 </div> <div style="width: 45%;"> M1 for any two correct decimal values seen with the correct expression
 e.g. 0.04, 0.4, 0.25, 0.16, 0.04

 B1 for $4b^k$ or B1 for kb^{12}
 where k is an integer ($k \neq 0$) </div> </div> |
| 6) | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 16 </div> <div style="width: 45%;"> (a) (i) p^{10}

 (ii) t^{-3} or $\frac{1}{t^3}$

 (b) 4 </div> </div> | | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"> 1

 1

 1 </div> </div> |
| 7) | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 1 </div> <div style="width: 45%;"> $4p$ </div> </div> | | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 1 </div> <div style="width: 45%;"></div> </div> |
| 8) | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"></div> <div style="width: 45%;"> (b) $3x^6y^4$ </div> </div> | | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 2 </div> <div style="width: 45%;"> B1 for x^6 or y^4 in a product on answer line </div> </div> |
| 9) | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 5 </div> <div style="width: 45%;"> 0.5^3 0.5^2 0.5 $\sqrt[3]{0.5}$ </div> </div> | | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> 2 </div> <div style="width: 45%;"> B1 for 0.25, 0.125 and 0.793... seen or for three in correct order </div> </div> |

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10)	17	(a)	$5t^{25}$	2	B1 for $5t^k$ or mt^{25} ($m \neq 0$)
		(b)	-2		
		(c)	64		