Indices

12 December 2019 14:54

Express each of the following in the form 2^n, $n \in Q$

i) 8
$\downarrow$
$(2)^3$
$2^{\square}$
$\downarrow$
Base

ii) $\sqrt{2} = \frac{1}{2}$
$\downarrow$
$2^{1/2}$
$49^{1/2}$
$\sqrt{49} = 7$

iii) $\sqrt{8}$
$\downarrow$
$(23)^{\frac{1}{2}}$
Multiply Powers
$3 \times 1/2 = 3/2$
Ans $2^{3/2}$

iv) $\sqrt{32}$
$\downarrow$
$(2^5)^{1/2}$
$5 \times 1/2$
$= 5/2$
Ans $= 2^{5/2}$

v) $\frac{\sqrt{8}}{2} = \frac{2^{3/2}}{2^1}$ $\frac{3}{2} - 1 = \frac{1}{2}$

$= 2^{1/2}$ $\sqrt{2}$

18) Express each of the following in the form 5^n, $n \in Q$

i) 25 ii) $\sqrt{5}$ iii) $\frac{25}{\sqrt{5}}$ iv) $\sqrt{125}$ v) $\frac{25}{\sqrt{125}}$

Pg 39

Q19