

How do you do this problem? The square root of 2 + the square root of 2/9?

I know the answer is 4 square root of 2 over 3 but i don't know how they got that answer...

Solution:

$$\sqrt{2} + \sqrt{\frac{2}{9}} = \sqrt{2} + \frac{\sqrt{2}}{\sqrt{9}} = \sqrt{2} \left(1 + \frac{1}{\sqrt{9}}\right) = \sqrt{2} \left(1 + \frac{1}{3}\right) = \sqrt{2} \left(\frac{3+1}{3}\right) = \frac{4\sqrt{2}}{3}.$$