$$oxed{11} \sin heta + \cos heta = rac{2}{3}$$
 のとき, 以下の式の値を求めよ. (1)  $\sin heta \cos heta$ 

(2) 
$$\sin^3 \theta + \cos^3 \theta$$

$$\begin{aligned}
& \text{pin} \theta + \cos \theta = \frac{2}{3} \\
& \left( \text{pin} \theta + \cos \theta \right)^2 = \frac{4}{9} \\
& \left( \text{pin} \theta + \cos \theta \right)^2 = \frac{4}{9} \\
& \text{pin} \theta + \cos \theta + \cos \theta = \frac{4}{9} \\
& \text{sin}^2 \theta + \cos^2 \theta = |7 \text{ AAZ''}| \\
& 2 \text{pin} \theta \cos \theta + | = \frac{4}{9} \\
& 2 \text{sin} \theta \cos \theta = -\frac{4}{9} \\
& 1 \text{pin} \theta \cos \theta = -\frac{4}{18} \\
& -\frac{4}{18} \end{aligned}$$

(2) 
$$\sin^3 \theta + \cos^3 \theta$$
  
=  $(\sin \theta + \cos \theta) (\sin^2 \theta - \sin \theta \cos \theta + \cos^2 \theta)$   
=  $\frac{2}{3} \times (1 - (-\frac{t}{10}))$   
=  $\frac{2}{3} \times \frac{23}{18} = \frac{23}{27}$