| 5th July Higher 5-a-day |  |
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| What is the probability of rolling a six, three times in a row on an ordinary dice? | Corbettmoths |
| Ella has a 4 digit padlock. <br> Each dial can be set to $0,1,2,3,4,5$ <br> Work out the total number of different combinations that have four different digits. |  |
|  | Find the area of the sector OAB. |
| Plank A <br> Volume $=750 \mathrm{~cm}^{3}$ <br> Mass $=900 \mathrm{~g}$Plank B <br> Volume $=0.0152 \mathrm{~m}^{3}$ <br> Mass $=7.6 \mathrm{~kg}$ | Which plank of wood is the most suitable? <br> Explain your answer. |
| $\begin{aligned} & \text { Plank } C \\ & \text { Volume }=1000 \mathrm{~cm}^{3} \\ & \text { Mass }=1.02 \mathrm{~kg} \end{aligned}$ <br> Mr.Dixon is building a toy boat for his son. He has three different planks of wood to choose from. <br> If wood has a density under $1 \mathrm{~g} / \mathrm{cm}^{3}$, it will float. |  |

