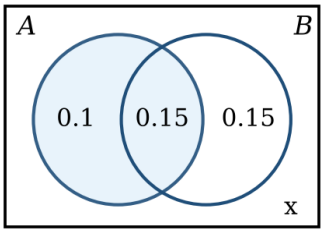
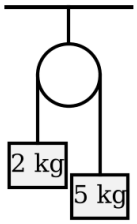
| Day 337 | A Level Maths: C Tier 10-a-day |
|---|---|
| **1** Write down the exact value of sin 60°. | |
| **2** Write $\sqrt{18}$ in the form $p\sqrt{q}$, where q is an integer as small as possible. | |
| **3** Find $\int \frac{1}{5x + 5}\,dx$. | |
| **4** A stone is projected vertically upwards with speed 28 m $s^{-1}$ from ground level. Taking g = 9.8 m $s^{-2}$, find the maximum height it reaches above the ground. | |
| **5** The curve $y = ab^x$ passes through (0, 3) and (4, 1875).<br>Find the values of a and b. | |

**Day 337** **A Level Maths: C Tier 10-a-day**

**6** The Venn diagram shows probabilities for events A and B.
Find the value of x.




**7** Two particles of masses 2 kg and 5 kg hang from the ends of a light inextensible string over a smooth pulley and are released from rest.
Take g = 9.8 m $s^{-2}$. Find the acceleration and the tension in the string.




**8** Find the sum of the first 11 terms of the series
11 + 15 + 19 + 23 + ...

**9** Here are 5 values: 19, 10, 8, 19, 3
Find the mean and the standard deviation, to 3 s.f.

**10** The nth term of a sequence is $u_n = 5n + 1$.
Find $\sum_{r=1}^{9} u_r$.