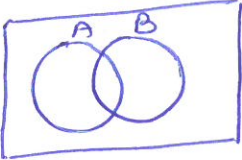
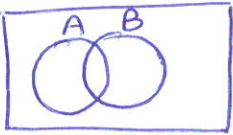


Year 9 Advanced Maths Homework Sheet 8

<p>1) What is the probability of throwing 5 heads in a row when you toss a coin?</p>	<p>2) When 3 coins are tossed find</p> <p>a) $\Pr(HHH)$</p> <p>b) $\Pr(2 \text{ heads})$</p> <p>c) $\Pr(\text{no heads})$</p>	<p>3) Find $\Pr(A \cap B)$ if</p> <p>a) $\Pr(A) = 0.2$ $\Pr(B) = 0.3$ and $\Pr(A \cup B) = 0.4$</p> <p>b) $\Pr(A) = 0.4$ $\Pr(B) = 0.5$ and $\Pr(A \cup B) = 0.5$</p>
<p>4) Amy beats Bev at tennis 80% of the time. If they play 3 games in one week find</p> <p>a) $\Pr(\text{Amy wins all 3})$</p> <p>b) $\Pr(\text{Bev wins all 3})$</p> <p>c) $\Pr(\text{Amy wins only 1})$</p>	<p>5) A bag has 36 lollies. 15 red, 12 green and the rest are black. 2 lollies are chosen, without replacing the first. find</p> <p>$\Pr(2 \text{ red})$</p> <p>$\Pr(\text{one black one green})$</p> <p>$\Pr(\text{not black or red})$</p>	<p>6) Shade the following</p> <p>a) $A \cap B'$</p>  <p>b) $A' \cap B'$</p> 
<p>7) Expand.</p> <p>a) $3(2x + y)$</p> <p>b) $(x + y)(2x - y)$</p> <p>c) $(3x + 1)(x - 2)$</p>	<p>8) Factorise.</p> <p>a) $3a^2 - 6b^2$</p> <p>b) $x^2 + 12x + 32$</p>	<p>9) Substitute.</p> <p>a) If $u = 5$ $v = -2$ find $\frac{5v^2 - u^2}{u}$</p> <p>b) If $F = 100$ find c</p> $\frac{c}{5} = \frac{F - 32}{9}$