

Yr 11 : Revision 3 : No Calculator

1) Express $0.\dot{7}\dot{8}$ as a fraction

2) Evaluate

a) $9^{-1/2}$

b) $\left(\frac{1}{8}\right)^{-2/3}$

3) Simplify these surds in the form $a\sqrt{b}$

a) $\sqrt{8}$

b) $\sqrt{200}$

c) $\sqrt{75}$

4) Evaluate, simplifying your answer

a) $(\sqrt{3} + \sqrt{2})(\sqrt{3} - \sqrt{2})$

b) $(3\sqrt{2} + \sqrt{3})^2$

5) A bag contains 3 green and 2 yellow beads.
2 beads are removed at random.

a) Calculate the probability they are both yellow

b) Calculate the probability that at least one green is pulled out

6) Write these as a single fraction

a) $\frac{3}{x+1} + \frac{2}{3x-1}$

b) $\frac{2}{x+a} - \frac{1}{x}$

7) Solve the equations

$\frac{2}{x+1} + \frac{1}{x-1} = 1$

8) Complete the table below showing the points on the curve
 $y = 2x^2 + x - 1$

x	-4	-3	-2	-1	0	1	2	3
y	29	14		0	-1	2	9	