

## Answers

Essential Skills 9	
1	(-3, 2)
2	(1, 3)
3	(7, 12)
4	(0, 12) & (9, 3)
5	(2, 2)
6	(-2, -2) & (6, 6)
7	(-6, -4) & (-2, 4)
8	(-3, -2) & (-17, -16)
9	(5, 9) & (8, 6)
10	(-1, 2) & (1, 0)
AQ	(a) $x^2 + y^2 - 2x + 6y - 15 = 0$ (b) (-4, -3) & (1, 2)

Essential Skills 10	
1	(6, 3, 2)
2	(0, 2, 4)
3	(4, 1, 7)
4	(5, 5, 9)
5	(4, 7, 2)
6	(-4, 0, 0)
7	(5, 4, 9)
8	(-3, 10, 0)
9	(2, 0, 1)
10	(0, 0, 6)
AQ	P (3, 6, 10)

Essential Skills 11	
1	$\frac{1 + \sqrt{3}}{2\sqrt{2}}$
2	$\frac{1 + \sqrt{3}}{2\sqrt{2}}$
3	$\frac{24}{25}$
4	$\frac{5}{13}$
5	$\frac{2 + \sqrt{3}}{2\sqrt{5}}$
6	$\frac{5\sqrt{3} - 12}{26}$
7	$\frac{1}{\sqrt{5}}$
8	$\frac{20}{29}$
9	$\frac{2}{\sqrt{5}}$
10	Proof
AQ	(1) $\frac{3}{5}$ (2) (a) $-\frac{2}{5\sqrt{5}}$ (b) $\frac{2}{11}$

Essential Skills 12	
1	$\frac{1}{2}$
2	$\sqrt{3}$
3	$\frac{1}{\sqrt{2}}$
4	-1
5	$-\frac{1}{2}$
6	$\frac{\sqrt{3}}{2}$
7	$-\frac{1}{\sqrt{2}}$
8	$-\sqrt{3}$
9	$-\frac{\sqrt{3}}{2}$
10	$\frac{1 - 2\sqrt{3}}{2}$
AQ	(1) $\frac{2\sqrt{3}-1}{10}$ (2)(a) $y = -\sqrt{3}x + 2\sqrt{3}$ (b) B(0, 2 $\sqrt{3}$ ) (3) -6