

Answers

Essential Skills 17	
1	Straight line with root at $x = 2$
2	Correct shape; roots at $x = 3$ and $x = 8$
3	Correct shape; roots at $x = -1$ and $x = 2$
4	Correct shape; roots at $x = -2$ and $x = 2$
5	Correct shape; roots at $x = 2$ and $x = 6$ (repeated)
6	Correct shape; root at $x = 3$ (repeated)
7	Correct shape; roots at $x = 2, x = 4$ and $x = 6$
8	Correct shape; roots at $x = 0, x = 4$ and $x = 6$
9	Correct shape; roots at $x = 0$ (repeated) and $x = 7$
10	
AQ	Correct shape; Decreasing POI @ $x = 1$ and Minimum TP @ $x = 3$

Essential Skills 18	
1	$x = 2$
2	$x = 6$
3	$x = 5$
4	$x = 4$
5	$x = 3$
6	$x = 3$
7	$x = \frac{3}{2}$
8	$x = 10$
9	$x = 4$
10	$x = 48$
AQ	(1) $x = \frac{37}{9}$ (2) $x = 4$

Essential Skills 19	
1	Proof
2	Proof
3	Proof
4	Proof
5	Proof
6	Proof
7	Proof
8	Proof
9	Proof
10	Proof
AQ	(1) (a) Proof (b) $1 - \sqrt{3}$ (2) (a) Proof (b) $\frac{1}{4}$

Essential Skills 20	
a	Correct shape; $(-1, -4), (0, 0), (2, -4)$
b	Correct shape; $(1, 0), (2, 4), (4, 0)$
c	Correct shape; $(1, 0), (0, 4), (-2, 0)$
d	Correct shape; $(-1, 3), (0, -1), (2, 3)$
e	Correct shape; $(-\frac{1}{2}, 0), (0, 4), (1, 0)$
a	Correct shape; $(-3, 2), (-2, -2), (0, 0), (1, 2)$
b	Correct shape; $(0, 5), (1, 1), (2, 3), (3, 5)$
c	Correct shape; $(0, 1), (-1, -3), (-2, -1), (-3, 1)$
d	Correct shape; $(0, -4), (1, 4), (2, 0), (3, -4)$
e	Correct shape; $(0, 2), (3, -2), (6, 0), (9, 2)$
AQ	Correct shape; $(-2, 5)$ and $(-1, 4)$