

Graphs of Functions

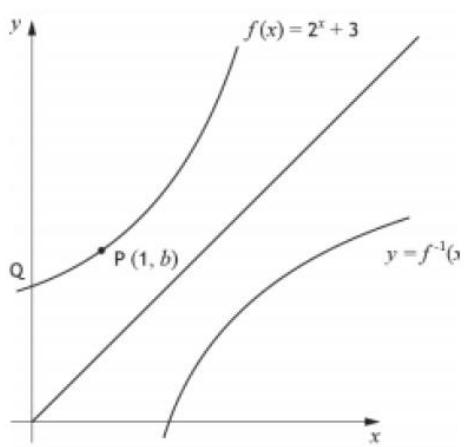
Answers

2019 P1 Q10	(a) $a = 3$ (b) $k = -2$	
2018 P1 Q11a only	(a) • ¹ a generally decreasing curve above the x -axis for $1 < x < 3$ • ² asymptote at $x = 0$ and passing through $(3, 0)$ and continuing to decrease for $x \geq 3$	
2017 P1 Q15a only	(a) $a = -5, b = 3$	
2016 P1 Q10	<ul style="list-style-type: none">•¹ graph reflected in $y = x$•² correct annotation	<ul style="list-style-type: none">•¹ <p>The graph shows a curve that is symmetric with respect to the line $y = x$. It passes through the point $(0, 1)$ on the y-axis and the point $(1, 4)$ in the first quadrant. The curve is increasing and concave up, starting from the bottom left and approaching the top right.</p> <ul style="list-style-type: none">•² $(0,1)$ and $(1,4)$
2015 P1 Q4	$p = 3, q = 4, r = 1$	

2015 P1 Q13

(a) $b = 5$

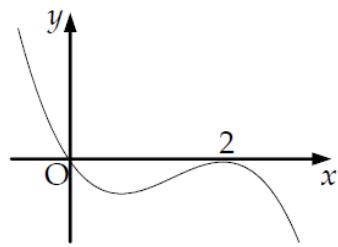
(b) (i)



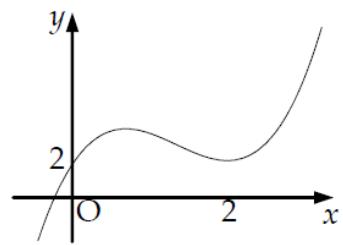
(ii) $P(5,1)$ $Q(4,0)$

(c) $R(2, -7)$

Graph for (a)



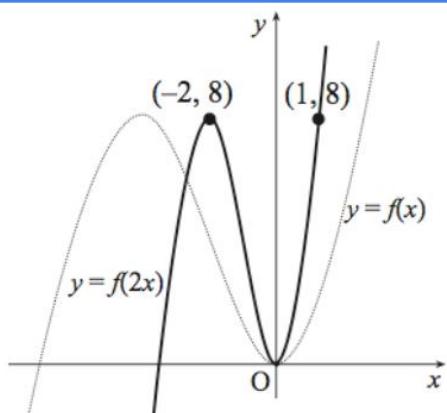
Graph for (b)



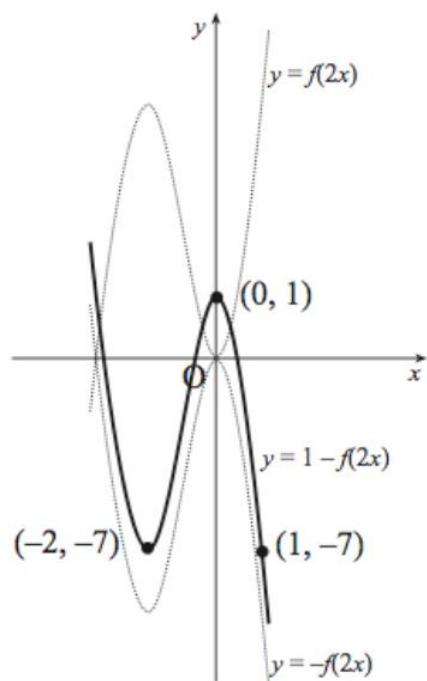
2012 P2 Q4

2009 P1 Q23

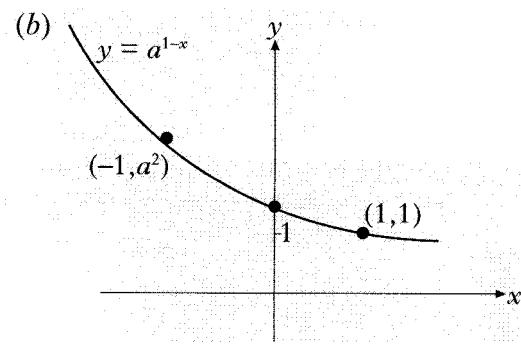
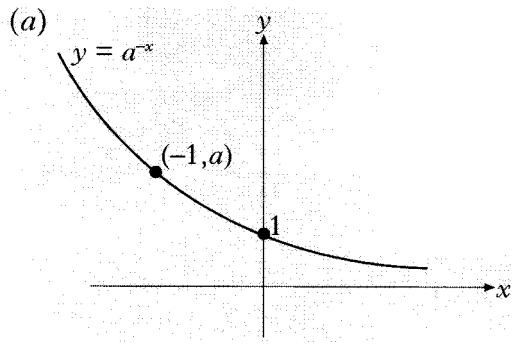
Solution to (a)



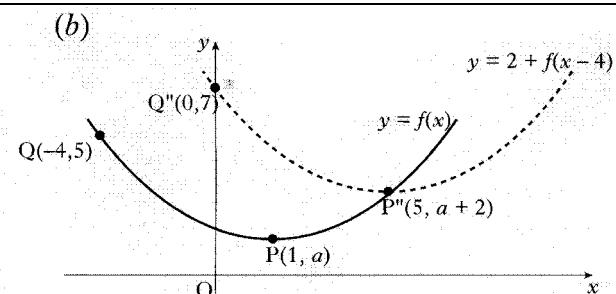
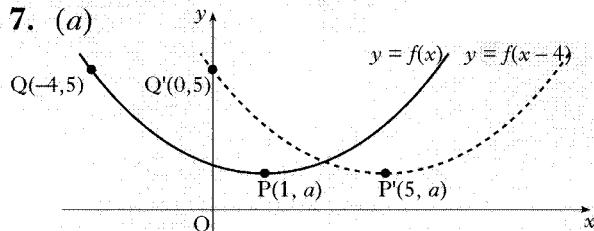
Solution to (b)



2007 P2 Q9

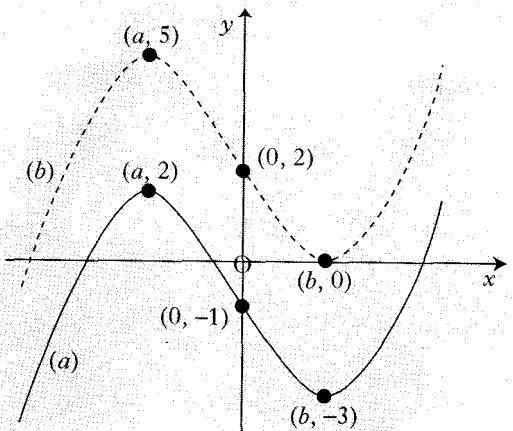


2006 P2 Q7

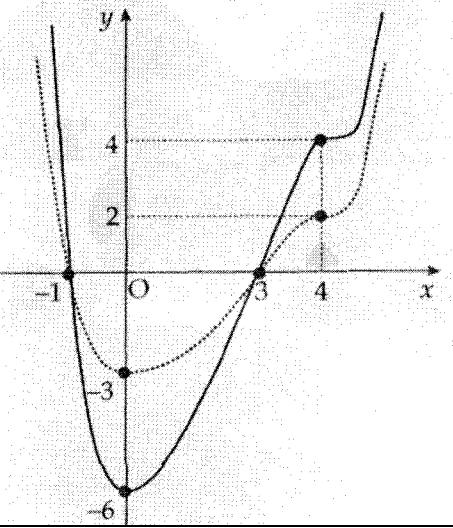


2004 P1 Q4

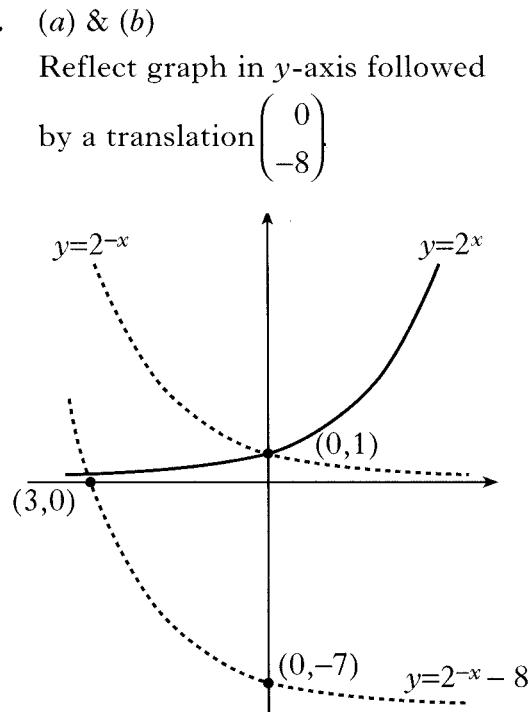
- (a) Reflect in x -axis.
 (b) Translate +3 parallel to y -axis

2
2

2003 P2 Q5



2002W P1 Q8

2
2

2002 P1 Q7	<p>(a) $x = 7$</p> <p>(b) $3x + 2y = 23$</p> <p>(c) $(7, 1)$</p>
2001 P1 Q10	<p>(a) $a = 1, b = 3$</p> <p>(b)</p>
2000 P1 Q2	<p>(a) $A = (1, 4)$</p> <p>(b) $f(x)$ needs to be translated 4 units up, 2 units left Sketch with A' at $(-1, 8)$ and B' at $(1, 4)$</p> <p>(c) $4 < k < 8$</p>
Specimen 2 P2 Q5	<p>(i)</p> <p>(ii)</p>