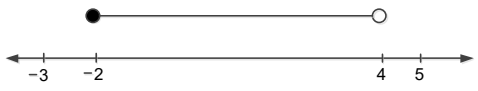


# Topic Test 1 Mark Scheme

## Inequalities - Higher

Q	Answer	Mark	Comments
1	$2 < x \leq 6$	B1	
2	$\{-2, -1, 0\}$	B1	
3	$x \geq 0, y \geq 0, x + y \leq 4$	B1	
4(a)	$-5 - 1 \leq 3x < 13 - 1$	M1	
	$-2 \leq x < 4$	A1	
4(b)		B1ft	ft their answer in part a
5	$0.8n > 5 + 12$ or 17	M1	
	$n > 21.25$	M1dep	
	22	A1	
6	$2x + x \leq 13 - 5$	M1	
	$x \leq \frac{8}{3}$	M1dep	oe
	2	A1	

Q	Answer	Mark	Comments
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7	$(2x \pm a)(x \pm b) > 0$	M1	$ab = \pm 5$
	$(2x - 5)(x + 1) > 0$	A1	
	Identifies roots as $-1$ and $2.5$ or correctly sketches the curve or $x > 2.5$ or $x < -1$	M1dep	
	$x > 2.5$ and $x < -1$	A1	oe

8	$x = 2$ and $y = 1$ plotted	M1	Condone solid lines
	$2x + 3y = 12$ plotted	M1	Condone broken line
	Correct region identified	M1dep	
	Fully correct diagram	A1	