Mark schemes

Q1.

Correct equation of any line or associated inequality
Ignore incorrect inequality signs

M1

Correct equations of all four lines or associated inequalities
Ignore incorrect inequality signs

M1

$x \geq 3$ and $y > 2$ and

$x > y$ and $x + y \leq 8$

A1

Use of included inequality for at least one of the solid lines
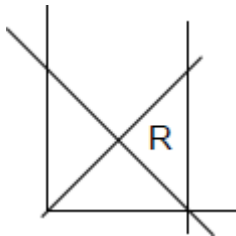*Strand (i) correct use of notation*

and

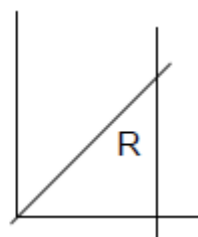Use of strict inequality for at least one of the dashed lines
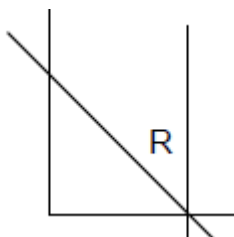
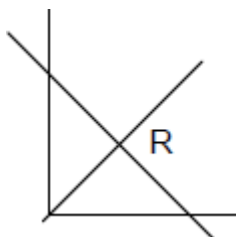**Q1ft**

[4]

Q2.

All lines correct, drawn dashed / solid R marked
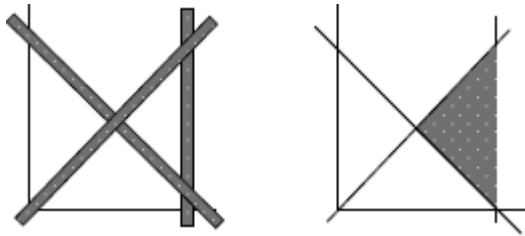

3 marks

R marked correct relative to two correct, drawn dashed / solid lines

3rd line incorrect or missing

2 marks

All lines correct, drawn dashed / solid
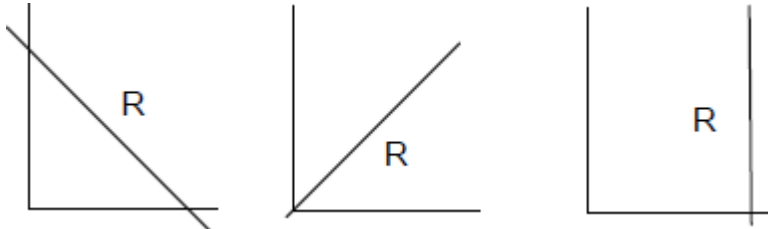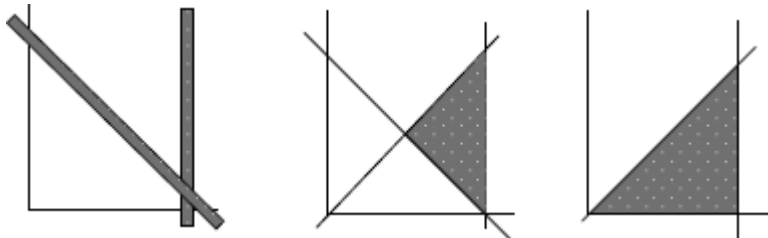
2 marks

R marked correct relative to one correct, dashed / solid line other lines incorrect or missing

1 mark

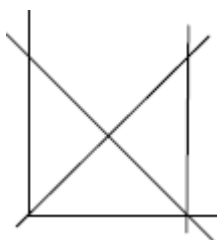Two lines correct drawn dashed / solid

1 mark

All lines correct, drawn dashed / solid

No shading

R not marked

1 mark

[10]

Q3.

$x + y = 7$

       oe allow = or any inequality sign

B1

$x \geq 2$ or $y > 1$

       oe

B1

$x \geq 2$ and $y > 1$ and $x + y < 7$

> *oe*
> *Strand (i) correct use of notation*
> *SC2 $x \leq 2$ and $y < 1$ and $x + y > 7$*
> *or $x > 2$ and $y \geq 1$ and $x + y \leq 7$*

[3]

Q4.

Line for $x = 3$

B1

Line for $y = x$

B1

Line for $y = 2x - 1$

B1

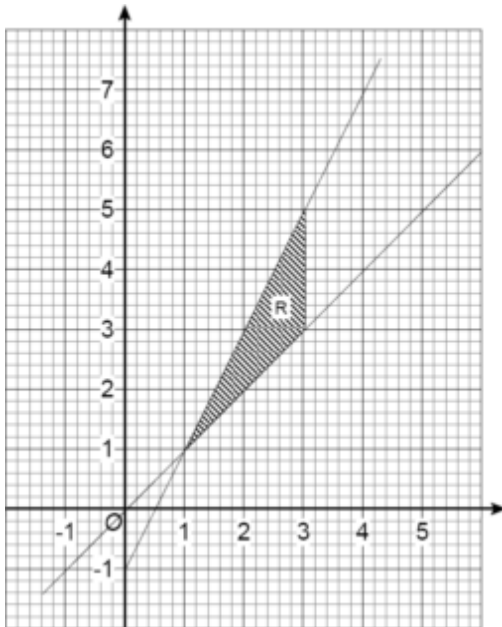R in the correct region

ft if two correct lines and only three drawn

B1 ft
[4]

Q5.

B or $x + y \geq 3$
and
D or $2y \geq x + 4$

> *B1 for one correct and at most one incorrect*

B2
[2]

Q6.

(a) $x + y < 7$

<div align="right">**B1**</div>

(b) $2y \geq x + 4$

<div align="right">**B1**</div>

<div align="right">**[2]**</div>

Q7.

$-3 -2 -1\ 0\ 1\ 2$

> *B1 for 5 correct and 0 incorrect*
> *or 6 correct and 1 incorrect*

<div align="right">**B2**</div>

Additional Guidance

Do not accept coordinates

<div align="right">**[2]**</div>

Q8.

$-2.5 < x < 1$

<div align="right">**B1**</div>

<div align="right">**[1]**</div>

Q9.

Line $x = 3$ should be dashed or not included

> *oe e.g. vertical line should be dotted*

<div align="right">**B1**</div>

R is in the wrong place

> *oe e.g. region is not correct*
> *May be shown on diagram*

<div align="right">**B1**</div>

Additional Guidance

x is not equal to 3

<div align="right">**B1**</div>

R does not include $x = 3$

<div align="right">**B1**</div>

Straight line should be less than 3

<div align="right">**B1**</div>

$x = 3$ is not in the region

<div align="right">**B1**</div>

Line at $x = 3$ is closed not open

<div align="right">**B1**</div>

Lines are not drawn correctly (not enough)

<div align="right">**B0**</div>

Should have shaded above the dotted line ($y > 3 - x$)

B1

R should be where (2, 2) is

B1

R should be shaded

B0

[2]