Total Area: \(4y(2x+3) + x(2y+2)\)

\[
= 8xy + 12y + 2xy + 2x
\]

\[
= 10xy + 2x + 12y
\]

Area shaded: \(y(y+2+y)+y(x+1)\)

\[
= y(2y+2) + y(x+1)
\]

\[
= 2y^2 + 2y + yx + y
\]

\[
= 2y^2 + xy + 3y
\]

Area to be covered: \((10xy+2x+12y)-(2y^2+xy+3y)\)

\[
= 10xy+2x+12y-2y^2-xy-3y
\]

\[
= 9xy + 2x + 9y - 2y^2
\]

\[
=-2y^2 + 9xy + 2x + 9y
\]

\[\therefore \text{The simplified expression for the surface area that A1 has to cover is}\]

\[-2y^2 + 9xy + 2x + 9y.\]