



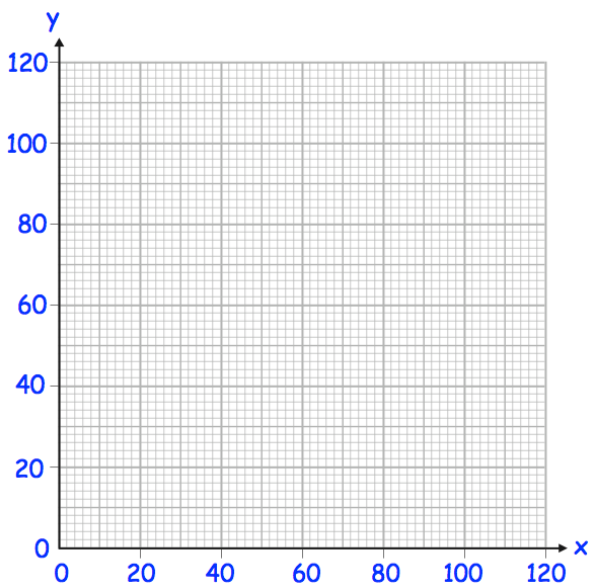
Solve the simultaneous equations

$$7x - 15y = 2.5$$

$$3x - 2y = 5.5$$

Simplify fully

$$\frac{x^2 + 8x}{x^2 + 10x + 16}$$



A greengrocer sells bananas and apples.
In one day he sells
up to 80 bananas
up to 90 apples
no more than a total of 110 pieces of fruit
Let x be the number of bananas sold
Let y be the number of apples sold.

Show the region below that satisfies these inequalities

Given that

$$a : b = 5 : 2 \quad \text{and} \quad b : c = 9 : 11$$

Find the ratio $a : c$

Give your answer in its simplest form.