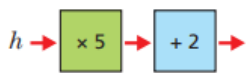


Year 8 Core – Brackets, Equations and Inequalities Questions

1.

Match each function machine with the correct expression.



$5(h + 2)$



$5h + 2$




$\frac{h}{2} + 5$




$\frac{h + 5}{2}$


2.




Strawberries
£ r per 100 g



Oranges
£ $3m$ each



Apples
£ $2r$ per kilogram



★ Pears ★
Special Offer
£ $2m$ each or
5 for £ $8m$

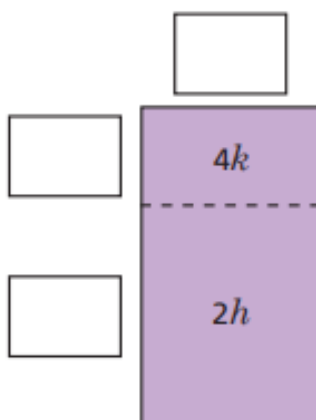
$\frac{1}{2}$ kg strawberries
 3.5 kg apples
 8 oranges
 7 pears

Write an expression for the total cost of the shopping on the list.

3.

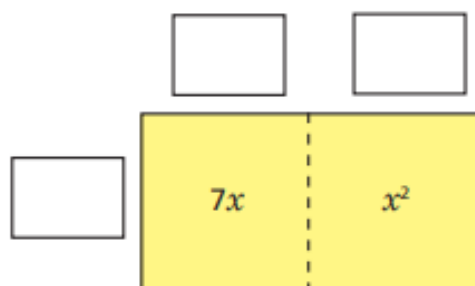
Use the rectangles to factorise the expressions.

a)



$4k + 2h \equiv$ _____

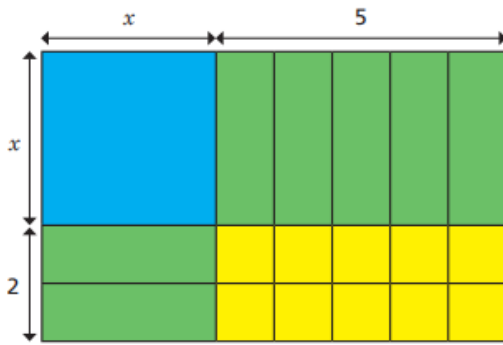
b)



$7x + x^2 \equiv$ _____

Year 8 Higher - Brackets, Equations and Inequalities Questions

1. Teddy is using algebra tiles to expand $(x + 5)(x + 2)$.



Use the algebra tiles to complete the expansion.

$(x + 5)(x + 2) \equiv$ _____

2. Here are some scales.



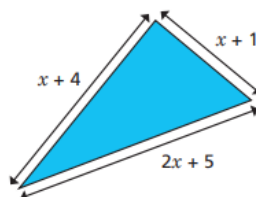
- a) Explain why $12 + 2g < 5g$.
- b) Explain why g cannot equal 4

3. Solve the inequalities.

- a) $w - 9 \geq 21 - 4w$
- b) $-3p + 7 < p + 13$

4. The red rectangle has a greater perimeter than the blue triangle.
Measurements are in centimetres.

a) Form and solve an inequality.



b) If the shortest side of the triangle has a length of 5 cm, what is the area of the rectangle?

□