# IGCSE PAST PAPER
# 0580 CORE PAPER 3

# ALGEBRAIC EXPRESSION AND LINEAR EQUATION

*WRITTEN BY RISHI*

1 **(a)** Simplify.

$4c+2d-c+6d$

..... [2]

**(b)** $h = 5m-2n$

Calculate $h$ when $m = 4$ and $n = -6$.

..... [2]

**(c)** Solve.

$7(x-3) = 56$

$x =$ ..... [2]

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2 **(a)** Simplify.

**(i)** $16c - 5d - 4c + 4d$

..... [2]

**(b)** Solve.

$3x - 2 = 5x + 1$

$x =$ ..... [2]

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3 **(a)** Simplify.

$5a + 6a - a$

.....[1]

**(b)**


NOT TO SCALE

Write an expression for the perimeter of the rectangle.
Give your answer in its simplest form.

.....[3]

**(c)** **(i)** Work out the value of $5x + 10y$ when $x = 7$ and $y = 9$.

.....[2]

**(ii)** Work out the value of $4r^2 - pr$ when $p = 3$ and $r = 5$.

.....[2]

**(d)** Solve.

$5(3x - 6) = 75$

$x =$ .....[3]

4 **(a)** Solve these equations.

**(i)** $x + 7 = 15$

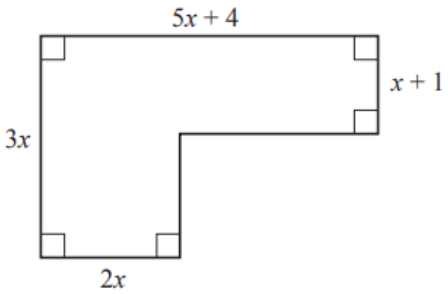
$x =$ ..... [1]

**(ii)** $5(3x + 8) = 10$

$x =$ ..... [3]



5




NOT TO SCALE

In the diagram, all lengths are in centimetres.

**(i)** Find an expression, in terms of $x$, for the perimeter of the shape.
Give your answer in its simplest form.

..... [2]

**(ii)** The perimeter of the shape is 72 cm.

Work out the value of $x$.

$x =$ ..... [2]

6 Simplify.

**(i)** $6a + 5h - 4a - 8h$

..... [2]

**(ii)** $5(x + 3) + 4(2x - 6)$

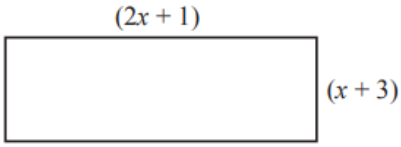
..... [2]

**(e)** A rectangle has length $(x + 6)$ cm and width 5 cm.
The area of this rectangle is 85 $cm^2$.

Find the value of $x$.

$x =$ ..... [3]

7 In this part, all measurements are in centimetres.




NOT TO SCALE

A rectangle has length $(2x+1)$ and width $(x+3)$.
The perimeter of the rectangle is 53.

Work out the value of $x$.

$x =$ ..... [5]

8 Simplify.

$5a+4b-2a-b+3a-2b$

..... [2]

Multiply out the brackets.

**(i)** $5(x-4)$

..... [1]