Simplify algebraic expressions by collecting like terms, using the ≡ symbol

1 Match each expression to its simplified form.

$2b + 5b$	$5b$
$7b - 2b$	$6b$
$3b \times 2$	$7b$
$2b - 7b$	$-5b$

2 Mo and Eva are simplifying expressions.

Tick the correct answers.

Expression	Mo's answer	Eva's answer
$9a - a$	$9a - a \equiv 9$	$9a - a \equiv 8a$
$b + b$	$b + b \equiv b^2$	$b + b \equiv 2b$
$3h^3 + 2h^2$	$3h^3 + 2h^2 \equiv 5h^2$	$3h^3 + 2h^2 \equiv 5h^5$
$3a + 3b$	$3a + 3b \equiv 6ab$	$3a + 3b \equiv 3a + 3b$
$5g + 2$	$5g + 2 \equiv 5g + 2$	$5g + 2 \equiv 7g$
$6 \times 2y$	$6 \times 2y \equiv 12y$	$6 \times 2y \equiv 8y$

3 **a)** Simplify the expressions.

$h + h + h + h + h \equiv$ ☐ $3h + 2h \equiv$ ☐

$4h + h \equiv$ ☐ $9h - 4h \equiv$ ☐

b) What do you notice about your answers?

c) Write five expressions that are equivalent to $3g$.

4 Simplify the expressions by collecting like terms.

a) $p + p + p + p \equiv$ ☐

b) $7f + 5f \equiv$ ☐

c) $11g - 8g \equiv$ ☐

d) $5h + 6h + 7h \equiv$ ☐

e) $4n + 6n - 2n \equiv$ ☐

f) $15y - y \equiv$ ☐

g) $3u - 7u \equiv$ ☐

h) $18y^2 + 3y^2 \equiv$ ☐

i) $8ef - 7ef + ef \equiv$ ☐

j) $0.8m - 0.35m + 0.7m \equiv$ ☐

k) $-5p + 7p \equiv$ ☐