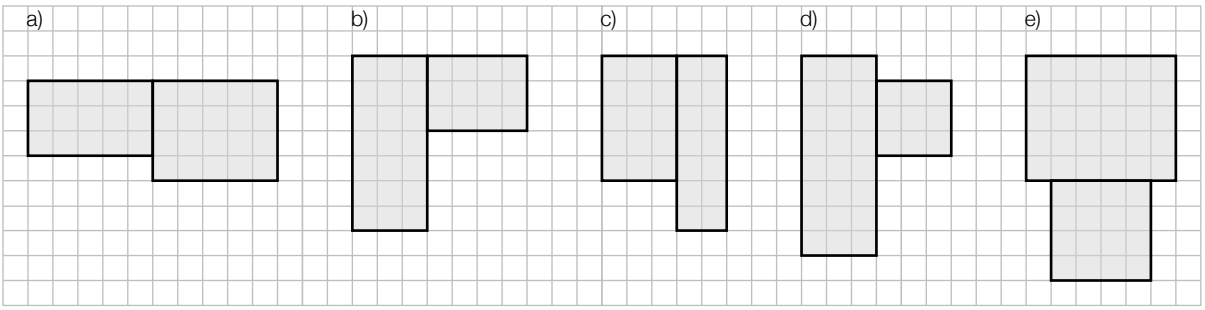
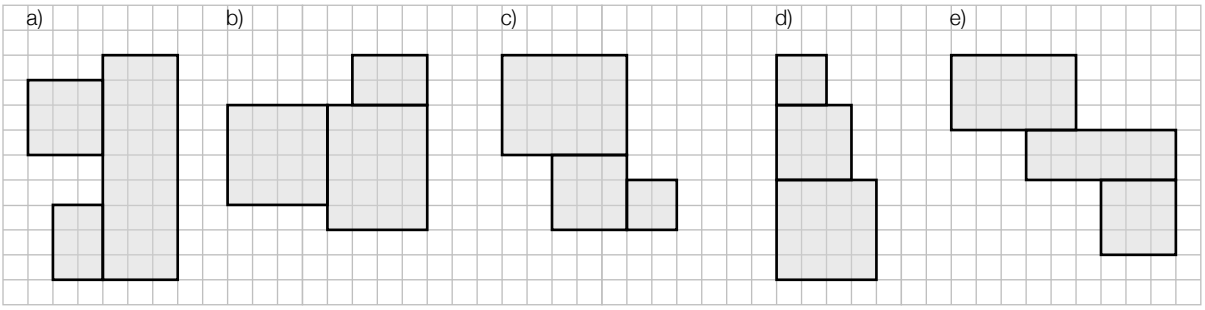
Order of Operations Using an Area Model

1 Write an expression for each total area ... and then complete the calculation with two more lines of working.



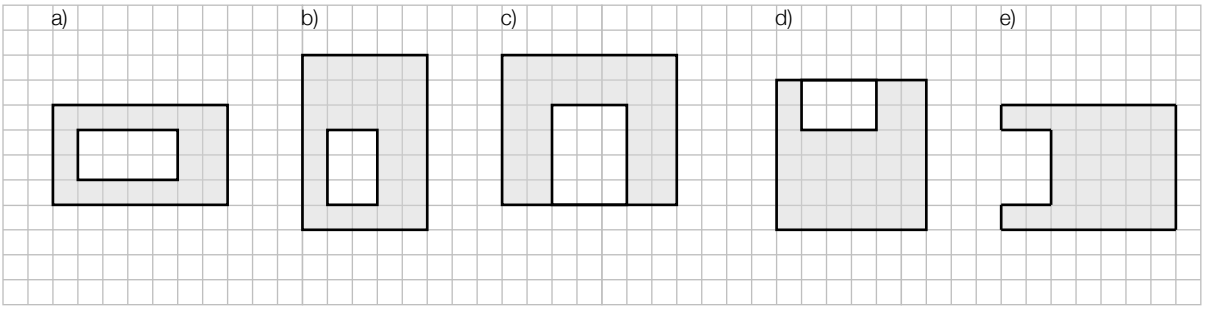
2 ... and the same again but if you have an area like 3×3, write it as 3^2



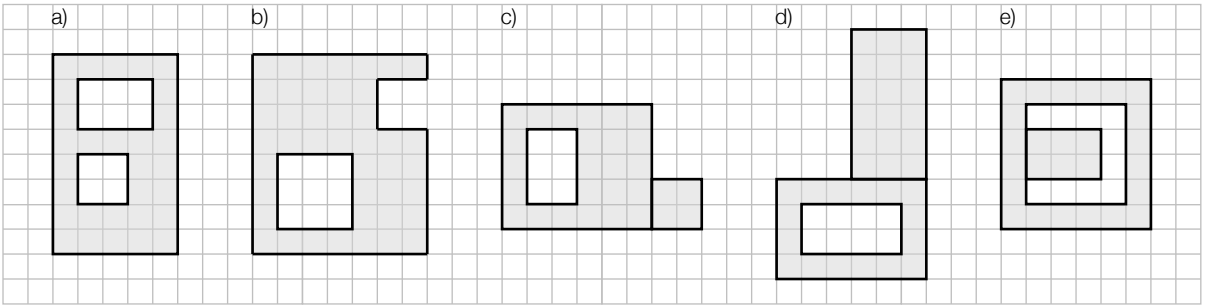
3 Draw out these expressions and calculate their value.

a) $3 \times 2 + 4 \times 5$
b) $5 \times 2 + 4 \times 2$
c) $3 \times 6 + 5 \times 3$
d) $3^2 + 2 \times 4$
e) $2 \times 5 + 4^2$
f) $3^2 + 2^2$
g) $2 \times 3 + 3 \times 4 + 7 \times 2$
h) $5 \times 3 + 4^2 + 3 \times 6$

4 Write an expression for each total area ... and then complete the calculation with two more lines of working.



5 ... and the same again but more complex.



6 Draw out these expressions and calculate their value.

a) $6 \times 5 - 2 \times 3$
b) $7 \times 5 - 4 \times 3$
c) $4 \times 3 - 2^2$
d) $4^2 - 3 \times 2$
e) $6 \times 6 - 2 \times 4 - 3 \times 2$
f) $5^2 - 3 \times 2 + 4^2$
g) $5 \times 4 - 2^2 + 3 \times 2$
h) $4 \times 6 - 3 \times 2 + 3^2$