BUILDING UP EXPRESSIONS

Build up an expression by following the instructions on the flow charts.

a

x $\xrightarrow{\times 5}$ $5x$ $\xrightarrow{-2}$ ☐

b

x $\xrightarrow{\div 3}$ $\dfrac{x}{3}$ $\xrightarrow{+1}$ ☐

c

x $\xrightarrow{\times 2}$ ☐ $\xrightarrow{+7}$ ☐

d

x $\xrightarrow{\div 5}$ ☐ $\xrightarrow{+11}$ ☐

e

x $\xrightarrow{\times \frac{1}{2}}$ ☐ $\xrightarrow{-3}$ ☐

f

x $\xrightarrow{\div 8}$ ☐ $\xrightarrow{-2}$ ☐
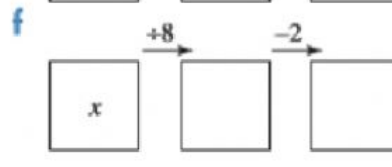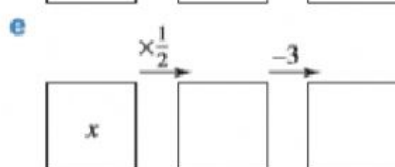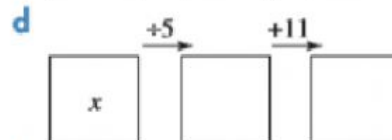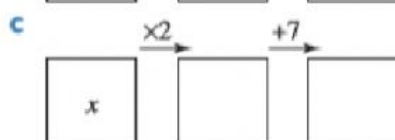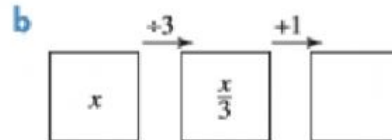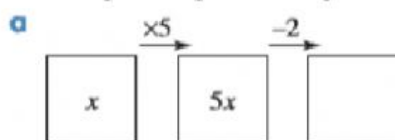
Build up an expression by following the instructions on the flow charts. Use a grouping device, such as a pair of brackets or a vinculum; for example $2(x+3)$ or $\dfrac{x-5}{4}$.
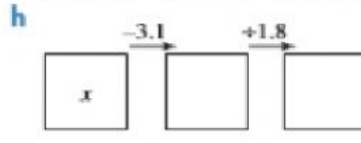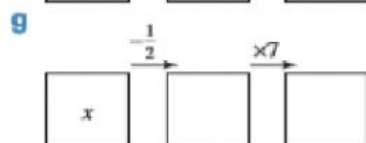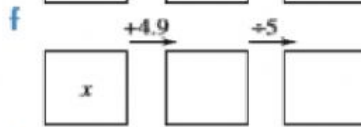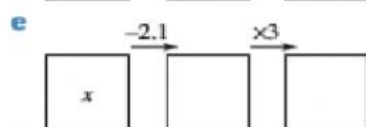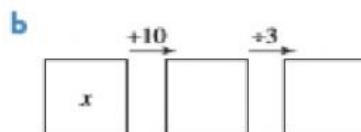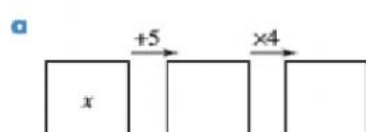
a

x $\xrightarrow{+5}$ ☐ $\xrightarrow{\times 4}$ ☐

b

x $\xrightarrow{+10}$ ☐ $\xrightarrow{\div 3}$ ☐

c

x $\xrightarrow{-2}$ ☐ $\xrightarrow{\div 7}$ ☐

d

x $\xrightarrow{+3}$ ☐ $\xrightarrow{\times 9}$ ☐

e

x $\xrightarrow{-2.1}$ ☐ $\xrightarrow{\times 3}$ ☐

f

x $\xrightarrow{+4.9}$ ☐ $\xrightarrow{\div 5}$ ☐

g

x $\xrightarrow{-\frac{1}{2}}$ ☐ $\xrightarrow{\times 7}$ ☐

h

x $\xrightarrow{-3.1}$ ☐ $\xrightarrow{+1.8}$ ☐

Copy and complete the following flow charts by filling in the missing expressions.

a

x $\xrightarrow{+2}$ ☐ $\xrightarrow{\times 6}$ ☐

b

x $\xrightarrow{\times 3}$ ☐ $\xrightarrow{-2}$ ☐

c

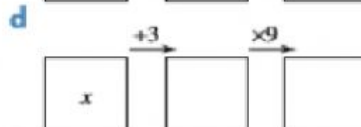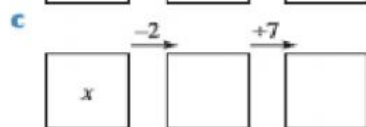x $\xrightarrow{-8}$ ☐ $\xrightarrow{\div 12}$ ☐

d

x $\xrightarrow{\times 4}$ ☐ $\xrightarrow{+1}$ ☐
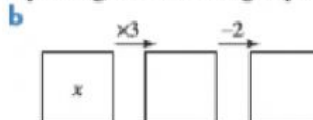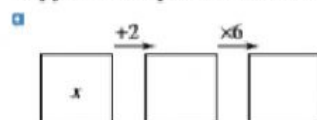
BUILDING UP EXPRESSIONS B

Copy and complete the following flow charts by filling in the missing expressions.

e

$$x \xrightarrow{\ \div 7\ } \boxed{} \xrightarrow{\ +3\ } \boxed{}$$

f

$$x \xrightarrow{\ -3\ } \boxed{} \xrightarrow{\ +5\ } \boxed{}$$

g

$$x \xrightarrow{\ +5\ } \boxed{} \xrightarrow{\ \times 6\ } \boxed{} \xrightarrow{\ -2\ } \boxed{}$$

h

$$x \xrightarrow{\ \times 3\ } \boxed{} \xrightarrow{\ +4\ } \boxed{} \xrightarrow{\ \div 7\ } \boxed{}$$

i

$$x \xrightarrow{\ -8\ } \boxed{} \xrightarrow{\ +5\ } \boxed{} \xrightarrow{\ +9\ } \boxed{}$$

j

$$x \xrightarrow{\ \div 3\ } \boxed{} \xrightarrow{\ +4\ } \boxed{} \xrightarrow{\ \times 6\ } \boxed{}$$

k

$$x \xrightarrow{\ \times 11\ } \boxed{} \xrightarrow{\ -2\ } \boxed{} \xrightarrow{\ \times 4\ } \boxed{}$$

l

$$x \xrightarrow{\ \times 3\ } \boxed{} \xrightarrow{\ +4\ } \boxed{} \xrightarrow{\ +2\ } \boxed{}$$
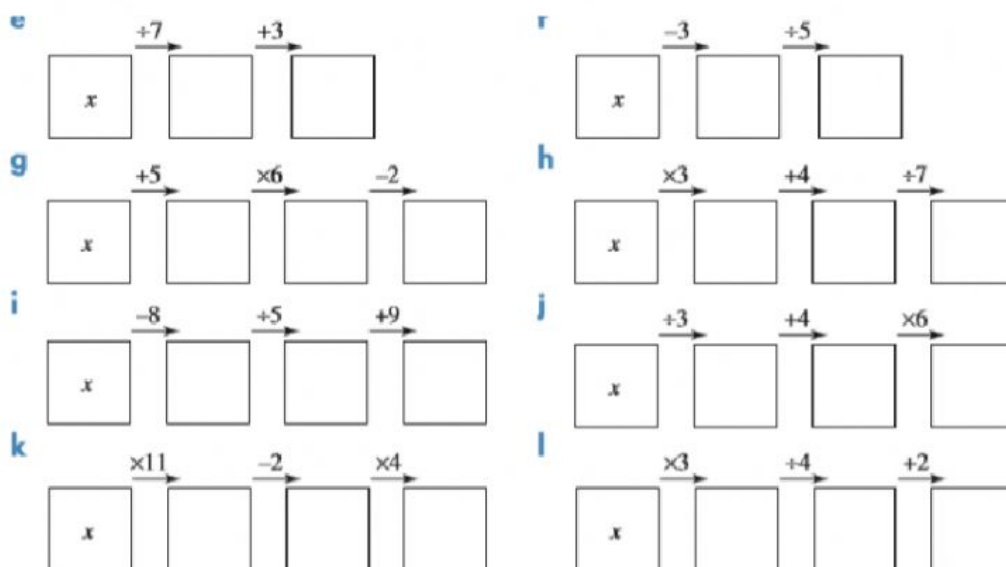
In your workbooks, draw up flowcharts whose inputs are *x* and whose outputs are shown below.

a $5x + 9$

d $\dfrac{x-8}{7}$

g $7x - 12$

j $\dfrac{3x+7}{2}$

m $\dfrac{3(x-11)}{12}$