

## Simplifying Expressions

1) Simplify the following expressions

a)  $6x \times 5$

b)  $6x - 2x + x$

c)  $8y \times 3y$

d)  $\frac{15k}{3}$

e)  $4x - y + x - 6y$

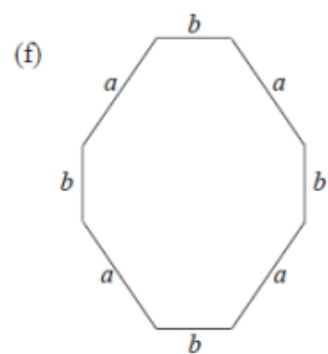
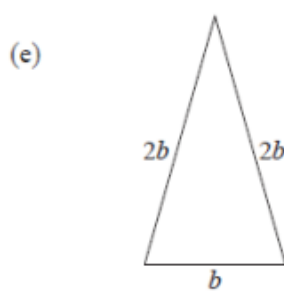
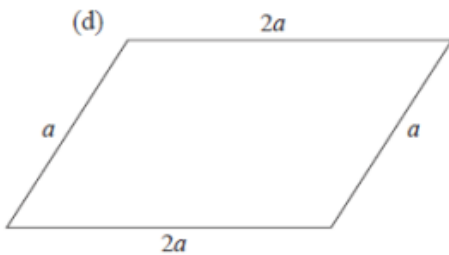
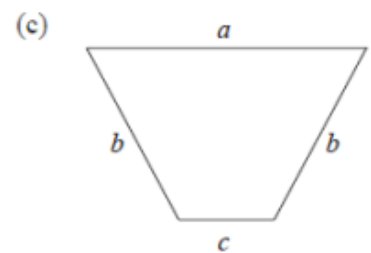
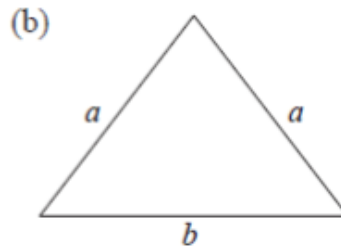
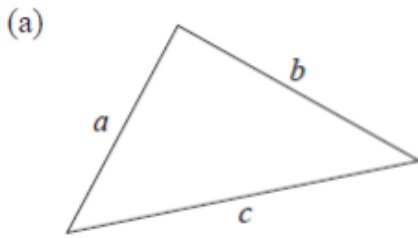
f)  $4m \times 3y \times 2$

g)  $9x + 3t - 3x - 8t$

h)  $m \times t \times 2m \times t^2$

i)  $\frac{4x}{8x}$

2) Write down a simplified expression for the perimeter of the following shapes



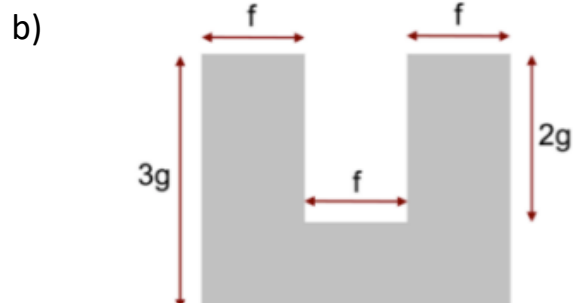
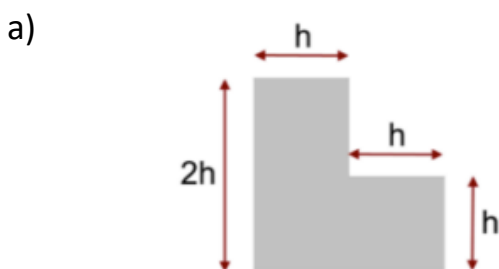
3) For the following linear sequences, find the next two terms and state the term-to-term rule for each one.

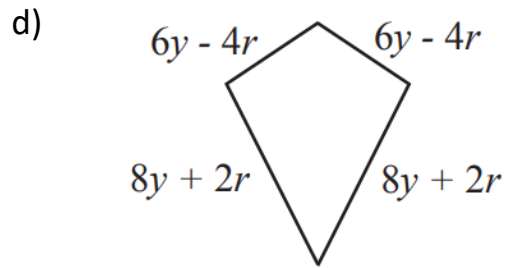
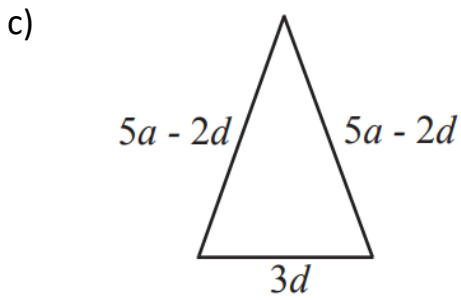
a)  $x, x + 3, x + 6, x + 9, \dots$

b)  $2x + 1, 4x - 2, 6x - 5, 8x - 8, \dots$

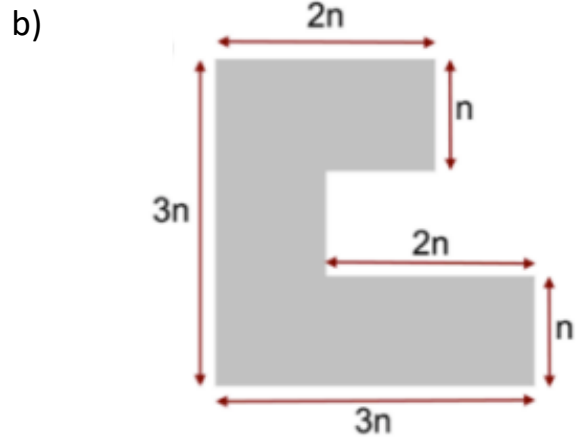
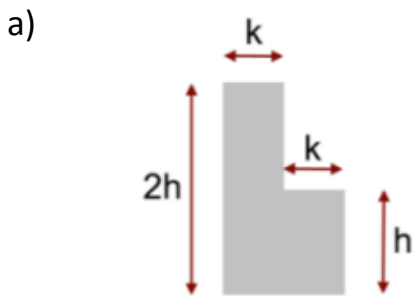
c)  $x - y, 3x - 2y, 5x - 3y, 7x - 4y, \dots$

4) Write a simplified expression for the perimeter of the following shapes

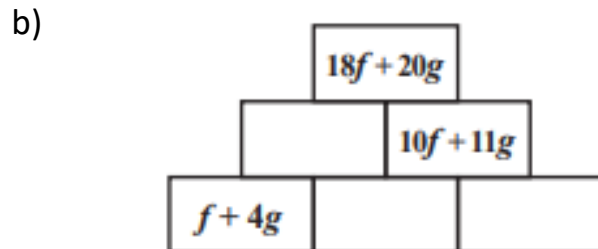
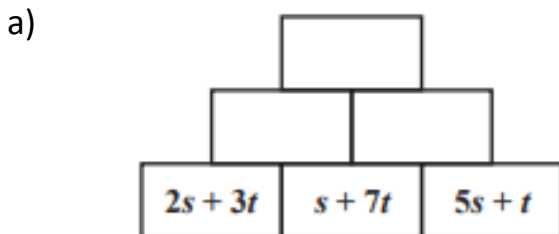




5) Write a simplified expression for the area of the following shapes



6) In the pyramids below, each box is the sum of the two boxes below.



Answers

1a)  $30x$  b)  $5x$  c)  $24y^2$  d)  $5k$  e)  $5x - 7y$  f)  $24my$  g)  $6x - 5t$  h)  $2m^2t^3$  i)  $\frac{1}{2}$

2a)  $a + b + c$  b)  $2a + b$  c)  $a + 2b + c$  d)  $6a$  e)  $5b$  f)  $4a + 4b$

3a)  $x + 12, x + 15$  add 3 b)  $10x - 11, 12x - 14$  add  $2x - 3$

c)  $9x - 5y, 11x - 6y$  add  $2x - y$  4a)  $8h$  b)  $6f + 10g$  c)  $10a - d$  d)  $28y - 4r$

5a)  $3hk$  b)  $6n^2$  6) from bottom to top, left to right a)  $3s + 10t, 6s + 8t, 9s + 18t$

b)  $7f + 5g, 3f + 6g, 8f + 9g$