

# Simplifying algebraic expressions

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Name: \_\_\_\_\_



Simplify the following expressions:

a)  $3x + 5x$

**8x**

e)  $5c + 3c - c$

**7c**

b)  $9y - 2y$

**7y**

f)  $9a + 4a + a$

**14a**

c)  $8x - x$

**7x**

g)  $24a - 7a - a$

**16a**

d)  $5x + x + 2x$

**8x**

h)  $8x + x - 9x$

**0**

Simplify the following expressions:

i)  $4x + 2y + 3y + x$

**5x + 5y**

n)  $9x - 3y + 4x - 6$

**13x - 3y - 6**

j)  $5y + 3x + 2y + x$

**4x + 7y**

o)  $11a - 4b + 4a - 3b$

**15a - 7b**

k)  $7x + 6x + 3 + y$

**13x + y + 3**

p)  $5s - 2t + 4 + 6t$

**5s + 4t + 4**

l)  $9x + 3y + x - y$

**10x + 2y**

q)  $15 + 3y - 3x + x - 4$

**-2x + 3y + 11**

Simplify the following expressions:

a)  $3x \times 4y$

**12xy**

e)  $5t \times 2t$

**10t<sup>2</sup>**

i)  $2d \times 6c \times 3d$

**36cd<sup>2</sup>**

b)  $4a \times b$

**4ab**

f)  $4a \times a^2$

**4a<sup>3</sup>**

j)  $a \times 3a \times 6a$

**18a<sup>3</sup>**

c)  $5x \times 3w$

**15xw**

g)  $2a \times 5ab$

**10a<sup>2</sup>b**

k)  $2a \times 3b^2 \times 5a$

**30a<sup>2</sup>b<sup>2</sup>**

d)  $8u \times 2v$

**16uv**

h)  $3x \times 2xy$

**6x<sup>2</sup>y**

l)  $5a^2b^2 \times 4ab^3$

**20a<sup>3</sup>b<sup>5</sup>**

Simplify the following expressions:

m)  $\frac{20a}{5}$

**4a**

q)  $\frac{30a^2}{6a}$

**5a**

u)  $\frac{8b}{16a}$

**b/2a**

n)  $\frac{20z}{5}$

**4z**

r)  $\frac{9ab^2}{3b}$

**3ab**

v)  $\frac{22b}{33a^2}$

**2b/3a<sup>2</sup>**

o)  $\frac{8x^2}{2}$

**4x<sup>2</sup>**

s)  $\frac{20t^3}{4t^2}$

**5t**

w)  $\frac{35a}{50a^2}$

**7/10a**

p)  $\frac{10a^4}{a^2}$

**10a<sup>2</sup>**

t)  $\frac{12c}{18c}$

**2/3**

x)  $\frac{16x}{24x^2}$

**2/3x**

 Exam style question:

The diagram shows an algebraic number pyramid.  
Each brick is equal to the product of the two bricks below it.  
Find the expressions for the missing bricks.

