

1 Simplify

a)  $5x + 2y - 3x + 4y$

b)  $9x^2 + 4x - 5x^2 - 7x$

c)  $6x - 3 + x + 5 - 2x + 2$

2 Solve

a)  $2x = 12$

b)  $5x = 40$

c)  $x + 4 = 12$

d)  $x + 5 = 19$

e)  $x - 3 = 14$

f)  $15 = 3x$

g)  $19 = a + 6$

h)  $44 = 4d$

i)  $12 = x + 5$

j)  $13 = m - 1$

k)  $2x + 1 = 9$

l)  $2a + 5 = 19$

m)  $3x - 1 = 11$

n)  $2c - 4 = 16$

o)  $5x - 6 = 29$

p)  $29 = 3x + 8$

q)  $3 + 2x = 13$

r)  $2x - 18 = 6$

s)  $80 = 7a + 3$

t)  $26 = 5x - 4$

now be careful of the negatives

u)  $2a + 10 = 4$

v)  $3c - 2 = -14$

w)  $-22 = 5x + 3$

x)  $4a - 3 = -19$

y)  $7 = 6d + 25$

3 Solve these be careful of the x both sides

a)  $2x + 5 = x + 9$

b)  $2x - 3 = x + 15$

c)  $3x + 8 = x + 18$

d)  $5x - 1 = 3x + 13$

e)  $2x + 16 = 5x + 1$

f)  $x + 28 = 7x + 4$

g)  $2x + 6 = 5x + 12$

h)  $9x - 5 = 2x + 23$

4 Expand the brackets and solve

a)  $2(x + 3) = 10$

b)  $4(x - 1) = 28$

c)  $3(x + 5) = 45$

d)  $3(2a - 1) = 3$

e)  $48 = 3(5x - 4)$

f)  $3(x + 5) = 2(x + 6)$

g)  $5(x - 1) = 3(x + 7)$

h)  $6(x - 1) = 9(x - 2)$

5 Here are some cards match the pairs of cards

$n + n$

$n \times n$

$6n \div 2$

$4 \times n$

$n^2$

$5n + 7n$

$6n - 2n$

$6n \times 2$

$n \times 2$

$n + 3n - n$

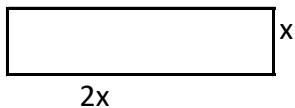
6 I think of a number, I double it, then add 1. My answer is 21

What is the number I originally thought of? Reverse the process to find it.

7 I think of a number, I take 5 and then double it. My answer is 12

What is the number I originally thought of? Reverse the process to find it.

8 If the length of a rectangle is twice its width and its perimeter is 48 cm work out its width?



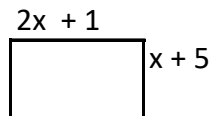
hint write the perimeter first in terms of x

9 The perimeter of this rectangle is 42 cm

Form an equation for the perimeter in terms of x

Now solve it to find x

Finally work out the area of the rectangle



10 Ben thinks of a number, times it by 5 and then adds 3. The answer to this is the same as when Brad starts with the same number, doubles it and then adds 15

Write this information as an equation, what number did Brad start with?

11 Solve

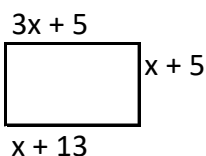
a)  $x^2 = 4$

b)  $x^2 = 25$

c)  $2x^2 = 18$

d)  $x^3 = 8$

12 Look at this rectangle, use the information to create an equation and find a value for x



Now work out the area and the perimeter of the rectangle

13 Solve (express your answer as a fraction and a decimal)

a)  $5x = 4$

b)  $8x - 2 = 2$

c)  $34 = 4x + 24$

d)  $7x + 4 = 11x + 7$