1 $j = 4k + 7m$

Find the value of j when $k = -5$ and $m = 6$.

$j =$ ..... [2]

[Total: 2]

2 White paper costs w cents per sheet and pink paper costs p cents per sheet.
Miguel uses 56 sheets of white paper and 21 sheets of pink paper.

Write down an expression, in terms of w and p, for the total cost, in cents, of the paper he uses.

..... cents [2]

[Total: 2]

3 $v = 3 - 5t$

Work out the value of v when $t = 4$.

$v =$ ..... [1]

[Total: 1]

4 A bag of rice costs \$$r$ and a bag of almonds costs \$$a$.
Pedro buys x bags of rice and y bags of almonds.

Write down an expression for the change that Pedro receives from a \$20 note.

\$ ..... [2]

[Total: 2]

5 Work out the value of $\frac{mk^3}{\sqrt{3}}$ when $m = 4$ and $k = 7$.

..... [2]

[Total: 2]

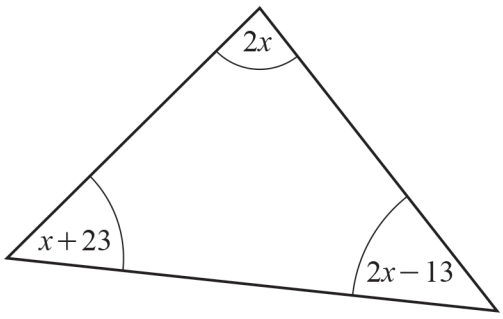
6 Simplify.

$4a - 3b + 5a + 6b$

..... [2]

[Total: 2]

7 In this question, all angles are in degrees.



NOT TO SCALE

(a) Use the information in the triangle to write down an equation in terms of x.

..... [1]

(b) Solve this equation to find the value of x.

$x =$ ..... [3]

(c) Work out the size of the smallest angle in the triangle.

..... [2]

[Total: 6]

8 Simplify $5c - d - 3d - 2c$.

..... [2]

[Total: 2]

9 Simplify $5t + 4t - 2t$.

..... [1]

[Total: 1]

10 Simplify.

$5g - 3h - 7g + 6h$

..... [2]

[Total: 2]

11 Simplify.

$3x - 4x + 7x$

..... [1]

[Total: 1]

12 Simplify.

$3\,(2a - b) - b$

..... [2]

[Total: 2]

13 Simplify.

$6\,(2x + 1) - 5\,(x - 2)$

..... [2]

[Total: 2]

14 Simplify.

$5f + 7g - 8f + 2g$

..... [2]

[Total: 2]

15 Simplify.

$a - 2b - 3a + 7b$

..... [2]

[Total: 2]

16 Expand and simplify.

$4(x - 5) - (3 - 2x)$

..... [2]

[Total: 2]

17 Expand and simplify.

$(x + 3)(x - 5)$

..... [2]

[Total: 2]

18 Expand and simplify.

$(x + 5)(x - 3)$

..... [2]

[Total: 2]

19 Expand and simplify.

$6(t - q) - 2(t - 3q)$

..... [2]

[Total: 2]

20 Expand and simplify.

$$5(2x - 7) - 3(x - 5)$$

..... [2]

[Total: 2]

21 Expand and simplify.

$$(2x + 3)(x - 2)^2$$

..... [3]

[Total: 3]

22 One solution of the equation $ax^2 + a = 150$ is $x = 7$.

(a) Find the value of a.

$a =$ ..... [2]

(b) Find the other solution.

$x =$ ..... [1]

[Total: 3]

23 Expand and simplify.
$(2x - 3)\,(x + 6)\,(x - 4)$

..... [3]

[Total: 3]

24 Expand and simplify.
$(x + 1)\,(x - 2)\,(x + 3)$

..... [3]

[Total: 3]