Maths-it Podcast F-09

Foundation GCSE Revision

Forming and solving linear equations

Topics

Set up equations
Solve linear equations, including unknown on both sides, brackets and negative numbers

Questions

1. Solve these equations

(a) $3x+1=13$

x=.....

(1)

(b) $x+14=2(3+x)$

x=.....

(3)

(c) $15-7x=50$

x=.....

(2)

(d) $1-2x=6-4x$

x=.....

(2)

(Total 8 marks)

2. Solve, $8x+1=x+55$, giving your answer to 1 d.p.

x=.....

(Total 2 marks)

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3. Memotec make memory sticks for computers. They make them in three sizes, 'ministik', 'midistik' and 'maxistik'. The ministik holds n megabytes of data.

ministik midistik maxistik

(a) The midistik holds twice as much data as the ministik. Write an expression in terms of n, for the amount of data the midistik holds.

……megabytes

(1)

(b) The maxistik holds 512 more megabytes than the midistik. Write an expression in terms of n, for the amount of data the maxistik holds.

……megabytes

(1)

(c) The maxistik holds 1024 megabytes of data. Write an equation and solve it to find n.

n=……

(3)

(Total 5 marks)

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4. Graeme thinks of a number. He adds 4 to it, then multiplies the result by 3. His answer is 36.

(a) Work out the number that Graeme thought of.

n=.....

(1)

Lizzie also thinks of a number, she calls it *n*. She multiplies her number by 7, then subtracts 5. Her answer is 23.

(b) Write this as an equation in terms of *n*.

n=.....

(2)

(Total 3 marks)

5. Solve.

(a) $\frac{3x+1}{5}=5$

x=.....

(2)

(b) $\frac{x+1}{3}=2(13-x)$

x=.....

(3)

(Total 5 marks)

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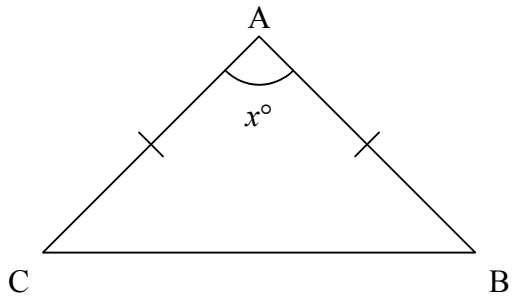
6. Triangle ABC is an isosceles triangle.



Not drawn to scale

AB = AC, AB = $4y+3$, BC = $20-2y$, BÂC = $x°$

(a) Write an expression for the perimeter of the triangle in terms of y.

perimeter =……

(2)

(b) The perimeter of the triangle is 38. Write and solve an equation to find y.

y=……

(3)

(c) Find an expression in terms of x for the size of angle AĈB.

AĈB =……

(2)

(Total 7 marks)