

Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Solving Equations 2

Calculator Not Allowed

INSTRUCTIONS TO CANDIDATES

- Write your name in the space provided.
- Write your answers in the spaces provided in this question paper.
- Answer ALL questions.
- Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

Total Marks :

1) Solve the equations

(a) $9x - 5 = 58$

Answer $x =$ _____ [2]

(b) $\frac{x}{8} = 3$

Answer $x =$ _____ [1]

(c) $4x + 7 = 13$

Answer $x =$ _____ [2]

2) $\frac{y}{3} = 6$

Answer $y =$ _____ [1]

3) $\frac{18}{z} = 3$

Answer $z =$ _____ [1]

4) a) $5a = 14$ Write down the value of $15a$.

Answer _____ [1]

b) Solve $3t - 7 = 5$

Answer $t =$ _____ [2]

5) (a) $x + 3 = 19$

Answer _____ [1]

(b) $3x = 18$

Answer _____ [1]

(c) $\frac{x}{7} = 8$

Answer _____ [1]

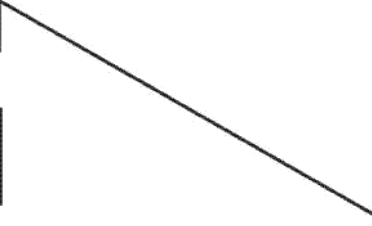
(d) $3x + 5 = 17$

Answer _____ [2]

6) Solve $5 + y = 13$

Answer $y =$ _____ [1]

- 7) (a) Draw a line from each of the following equations to its solution.
-
- The first one is done for you. [3]

$a - 5 = 6$		$a = 5$
$a - 2 = 6$		$a = 3$
$a + a = 2$		$a = 11$
$a - 3 = 0$		$a = 1$
		$a = 4$
		$a = 8$

- (b) Write down an equation that gives the solution
- $x = 10$
- . [1]

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- (c) Write down an equation that gives the solution
- $t = -4$
- . [1]

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8) Solve each of the following equations

(a) $x - 4 = 3$

Answer _____ [1]

(b) $4x = 36$

Answer _____ [1]

(c) $5x - 4 = 31$

Answer _____ [2]

9) (a) Solve the equation $\frac{x+5}{6} = 3$. [2]

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(b) Solve the equation $5(2x - 3) - 8x = 10$. [3]

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10) (a) Solve $x - 7 = 16$

Answer _____ [1]

(b) Solve $5x = 20$

Answer _____ [1]

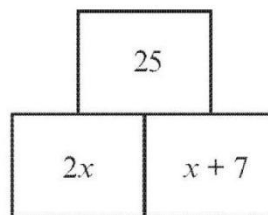
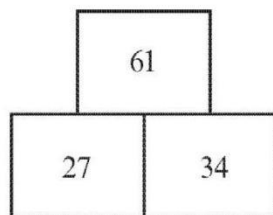
(c) Solve $\frac{y}{8} = 9$

Answer _____ [1]

(d) Solve $4a + 3 = 39$

Answer _____ [2]

11)



In the diagrams above, you find the value in the box on the top by finding the sum of the values in the two boxes below it.

For the second diagram, set up an equation and solve it to find the value of x .

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[3]

12)

- (a) The equations to be solved, on the left, have a number missing. The solution to each equation is shown on the right. Fill in the missing numbers.

[4]

$x - \dots = 9$	→	$x = 10$
$x + \dots = 6$	→	$x = -3$
$\dots + x = -2$	→	$x = -12$
$4x = \dots$	→	$x = 0$

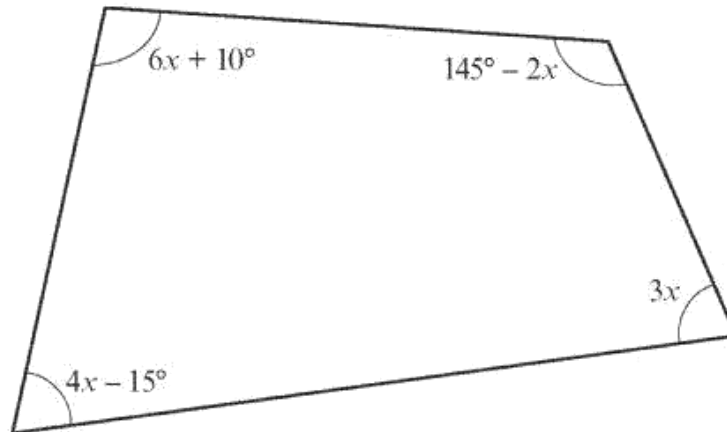
- (b) Find the values of x and y when $6x - 42$ and $x + y = 5$

$$x = \dots \quad y = \dots \quad [2]$$

- (c) Use your answer to part (b) to find the value of $5x - 9y$

Answer _____ [2]

13)



In the quadrilateral above all angles are measured in degree. The four angles are

$$6x + 10^\circ$$

$$4x - 15^\circ$$

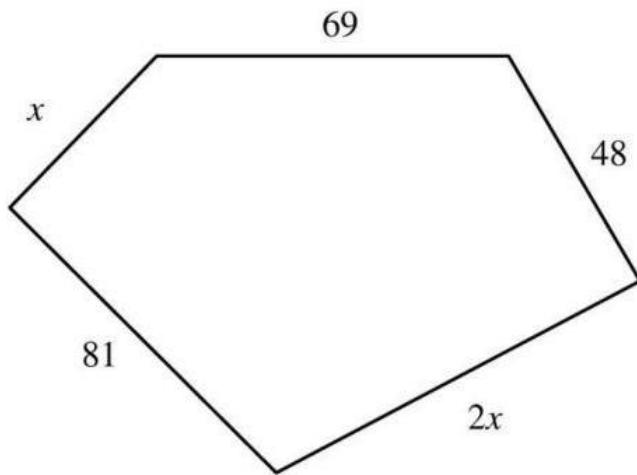
$$3x$$

$$145^\circ - 2x$$

Find the value of x which satisfies this diagram. You must show all your working

Answer _____ [4]

14)



(measurements in cm)

The perimeter of the pentagon is 306cm. Calculate the value of x .

Answer _____ [4]

15) Jacob's teacher gives him the following homework task:

Write 2 equations that
have a solution of
 $x = 5$

Write 2 possible equations that Jacob could use in his homework.

[2]

Equation 1 : _____

Equation 2 : _____