Name:	Teacher Assessment	

Section A   Solving Simple Linear Equations   Grade F → C

1.   (a)   Simplify $4c - c + 2c$

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Answer …………………………………………………………

(1)

(b)   Solve the equations

(i) $2x = 24$

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……………………………………………………………………………

Answer $x =$ ………………………………………………………..

(1)

(ii) $y - 9 = 11$

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……………………………………………………………………………

Answer $y =$ ………………………………………………………..

(1)

(iii) $\dfrac{z}{4} = 8$

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Answer $z =$ ………………………………………………………..

(1)

(iv) $4w + 3 = 13$

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……………………………………………………………………………

Answer $w =$ ………………………………………………………..

(2)
(Total 6 marks)

2. Complete the following table.

$x = 8$	$3x = 24$
$y = \ldots\ldots$	$4y = 20$
$3z = 12$	$5z = \ldots\ldots\ldots$

……………………………………………………

…………………………………………………

(Total 3 marks)

3. Solve these equations.

(a) $\dfrac{q}{3} = -4$

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Answer $q =$ ....

(2)

(b) $2(x + 3) = 11$

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Answer $x =$ ....

(3)
(Total 5 marks)

4. Solve this equation $\dfrac{12 - y}{3} = 5$

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Answer $y =$ ....

(Total 3 marks)

5. Solve the following equations

(a) $\dfrac{z + 4}{2} = 11$

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Answer $z =$ ....

(Total 2 marks)

6. Solve the equations

(a) $\dfrac{20}{x} = 4$

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Answer $x =$..

(2)

(b) $\dfrac{y}{3} + 5 = 9$

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Answer $y =$..

(2)
(Total 4 marks)

7. Solve the equation $\dfrac{23 - 2x}{5} = 3$

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Answer $x =$ ....

(Total 3 marks)

8. Solve the equation $\dfrac{17 - y}{3} = 4.5$

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Answer $y =$ ....

(Total 3 marks)

9. Solve the equations.

(a) $7t - 3 = 6 + t$

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Answer $t = $ ....

(3)

(b) $5x - 1 = 3(x + 2)$

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Answer $x = $ ....

(3)
(Total 6 marks)

10. Solve the equation $6y + 7 = 14y$

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Answer $y = $ ....
(Total 2 marks)

11. Solve the following equation $2x - 3 = 5x + 6$

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Answer $x = $ ....
(Total 3 marks)

12. Solve the equations

(a) $3w + 4 = 19 - 2w$

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Answer $w = $ ....

(3)

(b) $4(y + 3) = 9(y - 2)$

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Answer $y = $ ....

(3)

(Total 6 marks)

13. Solve the equation $2(x + 5) = 7 - 4x$

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Answer $x = $ ....

(Total 3 marks)

14. Solve the equation $4(z - 1) = 2(z + 3)$

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Answer $z = $...

(Total 3 marks)

15. (a) Expand and simplify $2(3x-2)+4(x+5)$

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Answer …………………………………………………………

(2)

(b) Solve the equation $2(3x-2)+4(x+5)=4(x-2)$

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Answer $x =$ ………………………………………………..

(3)

(Total 5 marks)

16. Solve the equation $3(2z-1)+4(z+3)=5(2z-1)+4(3z-1)$

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Answer $z =$ ………………………………………..

(Total 3 marks)

17. The total of each row is given at the side of the table.

$4x + 1$	$2(x + 5)$	20
$2x$	4	A

Find the values of x and A.

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Answer $x = $ ....

$A = $ ....

(Total 3 marks)

Success:	Target:
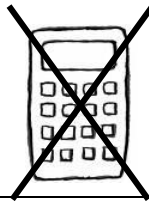
Section B Forming and Solving Equations Grade C

1. Ali is x cm tall.

(a) Suki is 5 cm taller than Ali.

Write down an expression in x for Suki's height.

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Answer .... cm

(1)

(b) Ali's sister is 2 cm shorter than Ali.

Write down an expression in x for the height of Ali's sister.

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Answer .... cm

(1)

(c) Ali's father is twice as tall as Ali.

Write down an expression in x for the height of Ali's father.

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Answer .... cm

(1)
(Total 3 marks)

2. Kris is x years old.
Jodie is 5 years younger than Kris.
Their combined ages add up to 41 years.

Form an equation in x and solve it to find Kris's age.

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Answer...years

(Total 3 marks)

3. Meg's lucky number is x.

(a) Tim's lucky number is 1 more than Meg's lucky number.
Write down an expression for Tim's lucky number in terms of x.

Answer ....

(1)

(b) Jenny's lucky number is double Meg's lucky number.
Write down an expression for Jenny's lucky number in terms of x.

Answer ....

(1)

(c) This flow diagram shows how Sam's lucky number is connected to Meg's lucky number.

Meg's lucky number, x → | subtract 3 | → | multiply by 2 | → Sam's lucky number
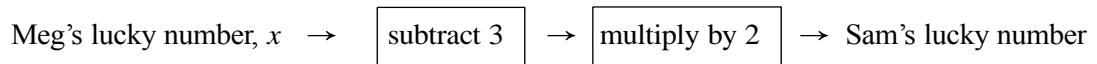
Write down an expression for Sam's lucky number in terms of x.

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Answer ....

(2)
(Total 4 marks)

4. The students in class 10W measure their hand spans.

(a) Juan's hand span is x cm.
George's hand span is 1 cm longer.

Write down an expression for George's hand span, in terms of x.
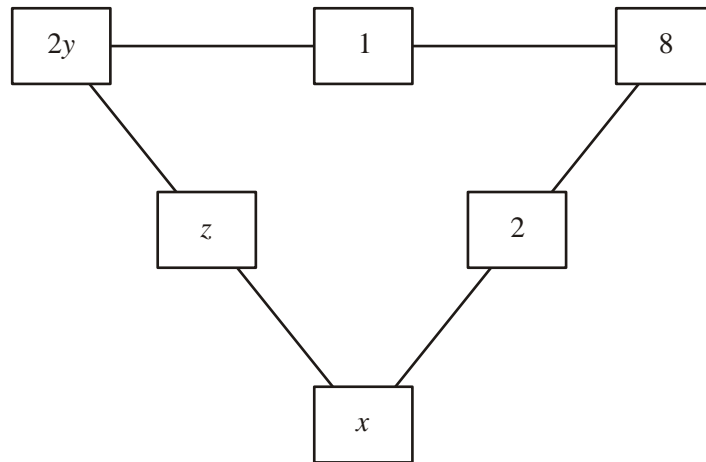
Answer …………………………………………. cm

(1)

(b) Vicky's hand span is y cm.
Emma's hand span is 2 cm shorter.

Write down an expression for Emma's hand span, in terms of y.

Answer …………………………………………. cm

(1)
(Total 2 marks)

5. The total for the three numbers along each side of the triangle is 17.

Find the values of x, y and z.

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Answer $x =$ …………………………………..

$y =$ …………………………………...

$z =$ …………………………………...

(Total 4 marks)

6. There are p seats in a standard class coach and q seats in a first class coach.

A train has 5 standard class coaches and 2 first class coaches.

Write down an expression in terms of p and q for the number of seats in the train.

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Answer ....

(2)
(Total 5 marks)

7. Rectangle A has length $(2x - 1)$ cm and width $(x + 2)$ cm.

$x + 2$ | A
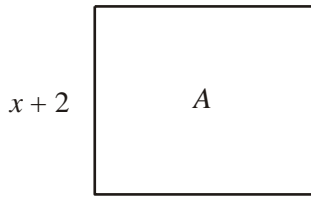
$2x - 1$ Not drawn accurately

(a)   Show that the perimeter of rectangle A is $(6x + 2)$ cm.

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(1)

(b)   Rectangle B has length $(x - 1)$ cm and width 5 cm.

5 | B
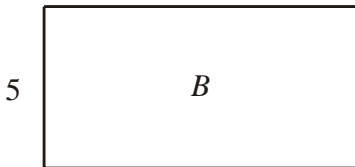
$x - 1$ Not drawn accurately

The perimeter of rectangle A is equal to the perimeter of rectangle B.
Write down and solve an equation in x.

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Answer $x =$ ....

(4)

(c)   Find the **area** of rectangle A.

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Answer .... cm^2

(2)

(Total 7 marks)

Success:	Target:

Teacher Assessment

Section C   Harder Equations With Fractions   Grade B → A*

1.   (a)   Solve $\dfrac{x}{4}+1=6$

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Answer $x=$ ....

(2)

(b)   Solve $\dfrac{4}{y+1}=3$

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Answer $y=$ ....

(3)

(Total 5 marks)

2.   Solve the equation $\dfrac{1}{2}x-5=\dfrac{1}{4}x+3$

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Answer $x=$ ....

(Total 3 marks)

3. Solve the equation $\dfrac{5}{3x-8} = \dfrac{4}{x+2}$

You must show your working.

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Answer $x=$..

(Total 3 marks)

4. Solve the equations

(a) $\dfrac{12-y}{3} = 5$

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Answer $y =$ ....

(3)

(b) $\dfrac{2x+1}{4} + \dfrac{4x+1}{6} = 1$

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Answer $x =$ ....

(4)

(Total 7 marks)

5. Solve the equation

$$\frac{x+1}{2} + \frac{x-3}{4} = 2$$

You **must** show all your working.

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Answer $x =$ ....

(Total 4 marks)

6. Solve the equation $\frac{x+3}{3} + \frac{x-4}{2} = 1$

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Answer $x =$ ……………………………….

(Total 4 marks)

7. Solve the equation $\dfrac{x+1}{3} + \dfrac{x+2}{5} = 1$

You **must** show your working.

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Answer $x = $ ………………………………

(Total 4 marks)

8. Solve the equation $\dfrac{3x+1}{2} - \dfrac{2x+5}{3} = 1$

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Answer $x = $ ....

(Total 4 marks)

Success:	Target: