Walking Talking - Solving Linear Equations

1.

(a) Solve $2x + 5 = 5(x + 1)$.

.....

.....

.....

.....

.....

[2]

(b) Solve $\frac{1}{3}(2x + 3) + 4x = 8$.

.....

.....

.....

.....

.....

.....

.....

.....

.....

[3]

2.

(a) Solve $\frac{8x}{5} = 60$.

.....

.....

[2]

(b) Solve $\frac{3}{x} = 12$.

.....

.....

[1]

(c) Solve $9x - 4 = 7(x + 2)$.

.....

.....

.....

.....

[3]

(d) Solve the inequality $10x + 5 > 45$.

.....

.....

.....

[2]

(e) Write down the smallest whole number that satisfies the inequality $9x > 60$.

.....

.....

.....

.....

[2]

3.

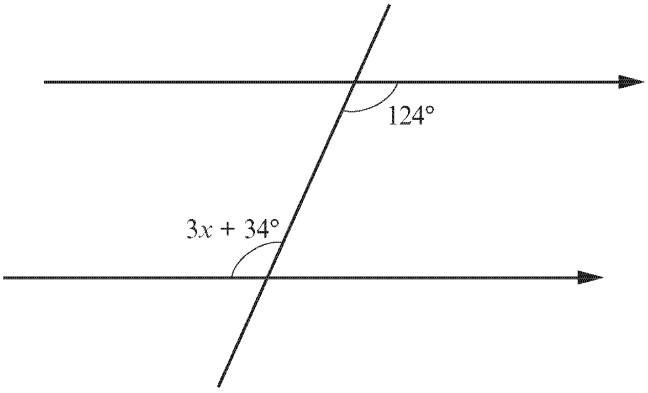

Diagram not drawn to scale

Use the information in the diagram above to find the value of x. [3]

.....

.....

.....

.....

$x =$ ..... °

4.

Solve $\frac{8x-5}{3}+\frac{4x+5}{4}=\frac{149}{12}$.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[4]

5.

(a) Solve $\frac{3x}{4} = 24$.

.....

.....

[2]

(b) Solve $\frac{8}{x} = 16$.

.....

.....

[1]

(c) Solve $7(5x - 4) = 77$.

.....

.....

.....

.....

[3]

(d) Solve the inequality $6x + 5 < 47$.

.....

.....

.....

[2]

(e) Write down the smallest whole number that satisfies the inequality $3x > 67$.

.....

.....

.....

.....

[2]

6.

ABCD is a parallelogram. All the angles are measured in degrees.

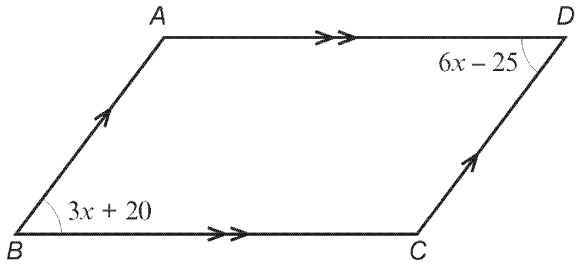

Diagram not drawn to scale

Find the size of $B\hat{C}D$. [5]

7. *(a)* Solve $8x - 11 = 3x + 29$.

.....

.....

.....

.....

.....

.....

[3]

(b) Factorise $7x + 49$.

.....

[1]

(c) Factorise $x^2 - 10x$.

.....

[1]

(d) Expand $2x(x + 6)$.

.....

.....

[2]

8.

(a) Simplify $3g + 5g - 6g$. [1]

.....

(b) Find the value of $7x - 4y$ when $x = 5$ and $y = 6$. [2]

.....

.....

.....

(c) Solve

(i) $6x = 24$, [1]

.....

.....

.....

(ii) $x - 7 = 29$. [1]

.....

.....

.....

9.

Solve the following equation. [3]

$$\frac{5x-1}{2} - x = \frac{1}{2}$$

10.

Yellow, blue and green tickets are sold in a raffle to raise money for charity.
The probability of the winning ticket being a particular colour is given in the following table.

Colour of ticket	Yellow	Blue	Green
Probability	$2a$	$0{\cdot}4$	$3a$

Find the probability that the winning ticket is green. [3]