1 Solve $3x = 6$

$$x = \frac{6}{3} = 2$$

Circle your answer.

[1 mark]

$x = 0.5$ $x = 2$ $x = 3$ $x = 18$

2   Solve $8x + 7 = 2x + 10$

[3 marks]

$$8x - 2x = 10 - 7 \quad \textcircled{1}$$

$$6x = 3 \quad \textcircled{1}$$

$$x = \frac{3}{6}$$

$$= \frac{1}{2} \quad \textcircled{1}$$

$$x = \quad \frac{1}{2}$$

3 (a) Solve $x + 17 = 12$

[1 mark]

$x = 12 - 17 = -5$

$x =$ -5 ①

3 (b) Solve $\dfrac{w}{4} = 12$

[1 mark]

$w = 12 \times 4$

$= 48$

$w =$ 48 ①

3 (c) Simplify fully $\dfrac{9m}{12m}$

[2 marks]

$\dfrac{9 \div 3}{12 \div 3} = \dfrac{3}{4}$

Answer $\dfrac{3}{4}$ ②

4   Here is an identity.

$$a(3x - 10) \equiv 21x + 2b$$

Work out the values of a and b.

[3 marks]

$a = 7$ (2)

$7(3x - 10) = 21x - 70$

$2b = -70$

$b = -35$ (1)

$a =$ _____ 7 _____ $b =$ _____ -35 _____

5   Solve $10x - 3 = 21$

[2 marks]

$$10x = 24 \text{ ①}$$

$$x = \frac{24}{10} = 2.4$$

$x = \underline{\quad 2.4 \text{ ①} \quad}$

6   Solve $4 + x = 12$

Circle your answer.   *x = 12 − 4*

= 8

[1 mark]

$x = -16$ $x = -8$ $x = 8$ $x = 16$

7   Solve $\dfrac{2w}{15} = \dfrac{4}{5}$

[2 marks]

$$2w = \frac{4}{5} \times 15 \quad ①$$

$$2w = 12$$

$$w = 6 \quad ①$$

$w =$ _____ **6** _____

8 (a)   Circle the point that is on the line $4x + y = 7$

[1 mark]

$(2, 1)$ $(2, -1)$ ① $(1, 2)$ $(-1, 2)$

$4(2) + (-1)$

$8 - 7 = 7$

9   Solve $5(2x - 1) = 6x + 9$

[3 marks]

$10x - 5 = 6x + 9$

$10x - 6x = 9 + 5$

$4x = 14$

$x = \dfrac{14}{4} = 3.5$

$x =$ _____ 3.5

10 (a) Solve $5x = 15$

[1 mark]

$x = \dfrac{15}{5} = 3$

$x =$ _____ 3 ①

10 (b) Solve $y + 7 = 50$

[1 mark]

$y = 50 - 7$

$= 43$

$y =$ _____ 43 ①

10 (c) Solve $\dfrac{c}{4} = 8$

[1 mark]

$c = 8\,(4)$

$= 32$

$c =$ _____ 32 ①

11 (a) Solve $11x - 3 = 6x + 1$

[3 marks]

$11x - 6x = 1 + 3$ ①

$5x = 4$ ①

$x = \dfrac{4}{5} = 0.8$ ①

$x =$ _____0.8_____

11 (b) Solve $\dfrac{2x}{5} = 14$

[2 marks]

$2x = 14 \times 5$

$2x = 70$ ①

$x = 35$ ①

$x =$ _____35_____

12 (a)   Solve $12 - e = 0$

[1 mark]

$$e = 12$$

$$e = \underline{\quad 12 \quad} \quad ①$$

12 (b)   Solve $7f = 0$

[1 mark]

$$f = \underline{\quad 0 \quad} \quad ①$$

13   Solve $7x - 22 = 4x + 29$

[3 marks]

$$7x - 4x = 29 + 22$$

$$3x = 51$$

$$x = \frac{51}{3}$$

$$= 17$$

$x =$ ___17___