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1

(c) Solve $y = \frac{2y + 1}{5}$

~~$5y = 2y + 1$~~

$5y = 2y + 1$

$-2y \quad -2y$

$3y = 1$

$\div 3 \quad \div 3$

$y = \frac{1}{3}$

$y = \dots\dots\dots$

(3)

(Total for Question 1 is 7 marks)



2 Solve $3(2 - 4x) = 5 - 8x$

$$\begin{aligned} 6 - 12x &= 5 - 8x \\ +12x & \quad +12x \\ 6 &= 5 + 4x \\ -5 & \quad -5 \\ 1 &= 4x \\ \div 4 & \quad \div 4 \\ \frac{1}{4} &= x \end{aligned}$$

$x = \dots\dots\dots$

(Total for Question 2 is 3 marks)

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3

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(c) Solve $5(x + 3) = 3x - 4$

$$\begin{array}{rcl}
 5x + 15 & = & 3x - 4 \\
 -3x & & -3x \\
 2x + 15 & = & -4 \\
 -15 & & -15 \\
 2x & = & -19 \\
 \div 2 & & \div 2 \\
 x & = & \frac{-19}{2}
 \end{array}$$

$x = \dots\dots\dots$
(3)



3

(c) Solve $\frac{5x-3}{4} = 2x+3$

$$\begin{array}{r} \times 4 \qquad \times 4 \\ 5x-3 = 8x+12 \\ -5x \qquad -5x \\ -3 = 3x+12 \\ -12 \qquad -12 \\ -15 = 3x \\ \div 3 \qquad \div 3 \\ -5 = x \end{array}$$

$$x = \dots\dots\dots (3)$$

(Total for Question 3 is 6 marks)

4



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3

(b) Solve $6x - 5 = \frac{4x - 7}{2}$

$$\begin{array}{r}
 \times 2 \quad \times 2 \\
 12x - 10 = 4x - 7 \\
 -4x \quad -4x \\
 8x - 10 = -7 \\
 +10 \quad +10 \\
 8x = 3 \\
 \div 8 \quad \div 8 \\
 x = \frac{3}{8}
 \end{array}$$

$x = \dots\dots\dots$
(3)

(Total for Question 3 is 5 marks)

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6



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4 Solve $4x - 13 = 17 + 8x$

$$\begin{aligned} & -4x \qquad \qquad -4x \\ & -13 = 17 + 4x \\ & -17 \quad -17 \\ & -30 = 4x \\ & \div 4 \qquad \div 4 \\ & \frac{-30}{4} = x \end{aligned}$$

$x = \dots\dots\dots$

(Total for Question 4 is 2 marks)

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4 (a) Solve $\frac{2x+5}{6} = 2x-5$

$\times 6 \quad \times 6$

$2x+5 = 12x-30$

$-2x \quad -2x$

$5 = 10x-30$

$+30 \quad +30$

$35 = 10x$

$\div 10 \quad \div 10$

$\frac{35}{10} = x$

$x = \dots\dots\dots$

(3)

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4

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(d) Solve $\frac{7x-2}{4} = 3x+1$

$$\times 4 \quad \times 4$$

$$7x-2 = 12x+4$$

$$-7x \quad -7x$$

$$-2 = 5x+4$$

$$-4 \quad -4$$

$$-6 = 5x$$

$$\div 5 \quad \div 5$$

$$\frac{-6}{5} = x$$

$x = \dots\dots\dots$
(3)

(Total for Question 4 is 9 marks)



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5 (a)

.....
(2)

(b) Solve $2x - 3 = \frac{3x - 5}{4}$

$\times 4 \quad \times 4$

$8x - 12 = 3x - 5$

$-3x \quad -3x$

$5x - 12 = -5$

$+12 \quad +12$

$5x = 7$

$\div 5 \quad \div 5$

$x = \frac{7}{5}$

$x =$
(3)

(Total for Question 5 is 5 marks)



P 6 8 7 9 6 A 0 7 2 8

5

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(b) Solve $4 - 3x = \frac{5 - 8x}{4}$

$$\begin{aligned}
 & \times 4 \qquad \times 4 \\
 16 - 12x &= 5 - 8x \\
 +12x \qquad +12x & \\
 16 &= 5 + 4x \\
 -5 & \qquad -5 \\
 11 &= 4x \\
 \div 4 & \qquad \div 4 \\
 \frac{11}{4} &= x
 \end{aligned}$$

$x = \dots\dots\dots$
(3)

(Total for Question 5 is 5 marks)



6 (a) Solve $\frac{2f}{3} = 4f - 17$

$\times 3 \quad \times 3$

$$2f = 12f - 51$$

$$-2f \quad -2f$$

$$0 = 10f - 51$$

$$+51 \quad +51$$

$$51 = 10f$$

$$\div 10 \quad \div 10$$

$$\frac{51}{10} = f$$

$$f = \dots\dots\dots (3)$$

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6

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(b) Solve $3n - 4 = \frac{5n + 6}{3}$

$\times 3 \quad \times 3$

$9n - 12 = 5n + 6$

$-5n \quad -5n$

$4n - 12 = 6$
 $\quad +12 \quad +12$

$4n = 18$

$\div 4 \quad \div 4$

$n = \frac{18}{4}$

$n = \dots\dots\dots$
 (3)

(Total for Question 6 is 5 marks)



P 7 3 9 9 0 A 0 7 2 8

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6 (a) Solve $p = \frac{3p - 5}{10}$

$\times 10 \quad \times 10$

$$10p = 3p - 5$$

$-3p \quad -3p$

$$7p = -5$$

$\div 7 \quad \div 7$

$$p = \frac{-5}{7}$$

$p = \dots\dots\dots$
(3)

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7

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(d) Solve $3(2x - 5) = \frac{9 - x}{2}$

$$6x - 15 = \frac{9 - x}{2}$$

$$12x - 30 = 9 - x$$

$$13x - 30 = 9$$

$$13x = 39$$

$$x = 3$$

$x = \dots\dots\dots$ (4)

(Total for Question 7 is 9 marks)

8



November 2020 P1H

7 (a) Solve $5(4-x) = 7 - 3x$

$$\begin{aligned} 20 - 5x &= 7 - 3x \\ +5x & \quad +5x \\ 20 &= 7 + 2x \\ -7 & \quad -7 \\ 13 &= 2x \\ \div 2 & \quad \div 2 \\ \frac{13}{2} &= x \end{aligned}$$

$$x = \dots\dots\dots (3)$$

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8



10

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(b) Solve $\frac{8-2x}{3} - \frac{2x-3}{2} = 4$

$\times 6$
 $\times 6$

$$\frac{6(8-2x)}{3} - \frac{6(2x-3)}{2} = 24$$

$$2(8-2x) - 3(2x-3) = 24$$

$$16-4x - [6x-9] = 24$$

$$16-4x - 6x + 9 = 24$$

$$25 - 10x = 24$$

$+10x$
 $+10x$

$$25 = 24 + 10x$$

$$-24 \quad -24$$

$$1 = 10x$$

$\div 10$
 $\div 10$

$$\frac{1}{10} = x$$

$x = \dots\dots\dots$ (3)



11

(c) Solve $\frac{4x-2}{3} - \frac{5-3x}{4} = 6$

$\frac{12(4x-2)}{3} - \frac{12(5-3x)}{4} = 72$

$4(4x-2) - 3(5-3x) = 72$

$16x - 8 - [15 - 9x] = 72$

$16x - 8 - 15 + 9x = 72$

$25x - 23 = 72$
 $\quad + 23 \quad + 23$

$25x = 95$

$\div 25 \quad \div 25$

$x = \frac{95}{25}$

2.8

$x = \dots\dots\dots$
 (4)

(Total for Question 11 is 8 marks)

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14



12

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(b) Solve $\frac{4m + 9}{3} = 7 - 2m$

$\times 3 \quad \times 3$

$4m + 9 = 21 - 6m$

$+6m \quad +6m$

$10m + 9 = 21$

$-9 \quad -9$

$10m = 12$

$\div 10 \quad \div 10$

$m = \frac{12}{10}$

$m = \dots\dots\dots (4)$



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14 (a) Solve $\frac{9a-7}{5} - \frac{3a-7}{4} = 4.55$



x20

x20

$$\frac{20(9a-7)}{5} - \frac{20(3a-7)}{4} = 91$$

$$4(9a-7) - 5(3a-7) = 91$$

$$36a - 28 - 15a + 35 = 91$$

$$21a + 7 = 91$$

$$-7 \quad -7$$

$$21a = 84$$

$$\div 21 \quad \div 21$$

$$a = 4$$

$a = \dots\dots\dots$
(3)



P 6 6 3 0 1 A 0 1 5 2 8

15

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(c) Solve $\frac{1-2y}{3} = \frac{4}{5} - \frac{2y-1}{2}$

x30 *x30*

$$\frac{30(1-2y)}{3} = \frac{30 \times 4}{5} - \frac{30(2y-1)}{2}$$

$$10(1-2y) = 6 \times 4 - 15(2y-1)$$

$$10 - 20y = 24 - 30y + 15$$

$$10 - 20y = 39 - 30y$$

$$\begin{array}{r} +30y \end{array} \qquad \begin{array}{r} +30y \end{array}$$

$$10 + 10y = 39$$

$$\begin{array}{r} -10 \end{array} \qquad \begin{array}{r} -10 \end{array}$$

$$10y = 29$$

$$\begin{array}{r} \div 10 \end{array} \qquad \begin{array}{r} \div 10 \end{array}$$

$$y = \frac{29}{10}$$

$y = \dots\dots\dots$

(3)

(Total for Question 15 is 7 marks)



P 7 2 8 2 8 A 0 1 5 2 8

