2026 WA1 Paper

St. Patrick's School

Secondary 2 G3 Mathematics

Duration: 45 min

Total	**/35**

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1. (a)(i) Solve $8 - 2x < 12$.

Ans: _____ [2]

(ii) Represent the solution of (a)(i) on a number line.

[1]

(b)(i) Solve $2(5 + \frac{2}{3}y) \leq \frac{y}{2}$

Ans: _____ [2]

(ii) Given that *y* is a perfect cube, find the largest possible value of *y*.

Ans: _____ [1]

2. Expand and simplify the following expressions.

(a) $-7(2x-3)+6(\frac{1}{3}x-4)$

Ans: _____ [2]

(b) $(x+5)(3x-4)$

Ans: _____ [2]

(c) $3(x-4)(7y+5x-2)$

Ans: _____ [3]

3. Solve the following pair of simultaneous equations.

$$4x - 3y = 25$$
$$6x + 5y = 9$$

Ans: _____ [3]

4. David and his friends bought 3 pairs of boots which cost $\$(3x^2 - 5)$ each and *x* shirts which costs $\$(2x + 7)$ each. Find the total cost of the items, in terms of *x*, in simplest form.

Ans: _____ [3]

5. (a) Solve the inequality $\frac{5w}{2} \leq 32$.

Ans: _____ [1]

(b) (i) List all the composite numbers that satisfies the above inequality in (a).

Ans: _____ [1]

(b) (ii) State the greatest rational number that satisfies the above inequality in (a).

Ans: _____ [1]

6. Dave had 20 pieces of $10-notes and $2-notes in his piggy bank. If the total value of all the notes is at least $99, find the minimum number of $10-notes he had by forming an inequality.

Ans: _____ [3]

7. The sum of marbles in two containers is 56. The number of marbles in container B is one-third of container A.
   (a) Form a pair of simultaneous equations.

Ans: Equation 1:_____

Equation 2: _____ [2]

   (b) Hence, find the number of marbles in each of the container.

Ans: _____ [3]

8. The table gives some values of x and y for the equation $3x + y = 2$.

x	-1	0	2
y	p	2	-4

(a) Calculate the value of p.

Ans: _____ [1]

(b) On the grid provided, draw the line $3x + y = 2$. [2]

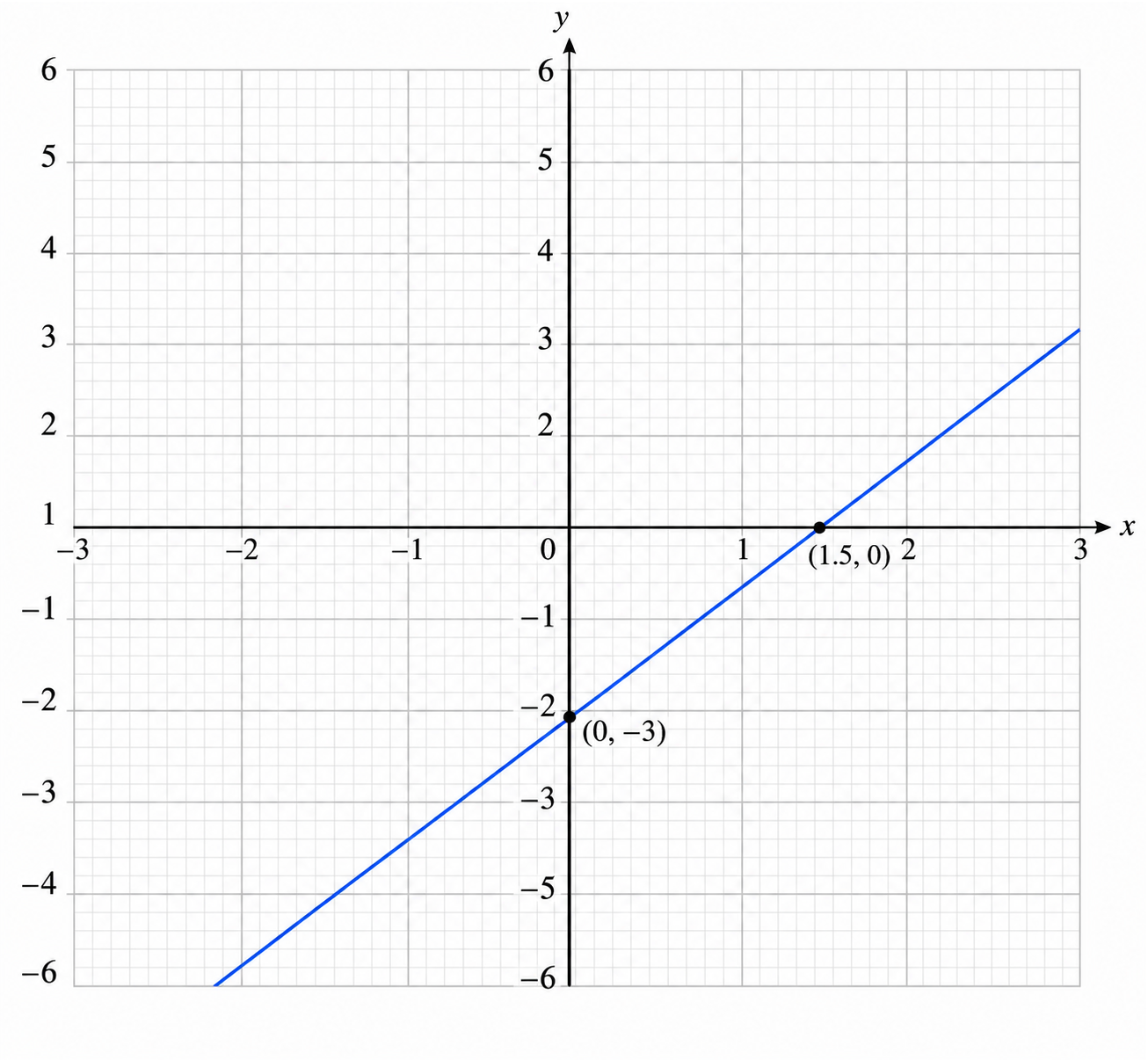
(c) On the same grid, the graph of $2x - y = 3$ has been drawn for you.
Ethan commented that the point $(0, -3)$ satisfies both $2x - y = 3$ and line A.
State a possible equation of line A.

Ans: _____ [1]

(d) Solve the following pair of simultaneous equations using the graphs.

$$3x + y = 2$$
$$2x - y = 3$$

Ans: _____ [1]



Solutions

1(a)(i) $\boxed{x > -2}$

1(b)(i) $\boxed{y \leq -12}$

1(b)(ii) $\boxed{-27}$

2(a) $\boxed{-12x - 3}$

2(b) $\boxed{3x^2 + 11x - 20}$

2(c) $\boxed{15x^2 + 21xy - 66x - 84y + 24}$

3. $\boxed{x = 4,\ y = -3}$
4. $\boxed{11x^2 + 7x - 15}$

5(a) $\boxed{w \leq \frac{64}{5}}$

5(b)(i) $\boxed{4,6,8,9,10,12}$

5(b)(ii) $\boxed{\frac{64}{5}}$

6. $\boxed{8}$

7(a)
Equation 1: $\boxed{a + b = 56}$
Equation 2: $\boxed{b = \frac{1}{3}a}$

7(b) $\boxed{A = 42,\ B = 14}$

8(a) $\boxed{p = 5}$

8(c) $\boxed{y = 2x - 3}$

8(d) $\boxed{(1, -1)}$