UNITED ARAB EMIRATES
MINISTRY OF EDUCATION

الإمارات العربية المتحدة
وزارة التربية والتعليم

ELITE STREAM
MATHEMATICS

Term 1, Academic Year 2025/2026

EOT 9 General T1-2025-2026

Name	
Class	
Date	

1	9 GEN	TERM1-M2L2
	2025/26	MCQ Solve equations by using addition and subtraction

Solve each equation.

1. $v - 9 = 14$

2. $44 = t - 72$

3. $-61 = d + (-18)$

4. $18 + z = 40$

5. $-4a = 48$

6. $12t = -132$

7. $18 - (-f) = 91$

8. $-16 - (-t) = -45$

9. $\frac{1}{3}v = -5$

10. $\frac{u}{8} = -4$

11. $\frac{a}{6} = -9$

12. $\frac{3}{4} = w + \frac{2}{5}$

13. $-\frac{k}{5} = \frac{7}{5}$

14. $-\frac{1}{2} + a = \frac{5}{8}$

15. $-\frac{t}{7} = \frac{1}{15}$

2	9 GEN	TERM1- M2L3
	2025/26	MCQ Solve equations involving more than one operation

Use properties of equality to solve each equation.

1. $3t + 7 = -8$

2. $8 = 16 + 8n$

3. $-34 = 6m - 4$

4. $9x + 27 = -72$

5. $\frac{y}{5} - 6 = 8$

6. $\frac{f}{-7} - 8 = 2$

7. $1 + \frac{r}{9} = 4$

8. $\frac{k}{3} + 4 = -16$

9. $\frac{n-2}{7} = 2$

10. $14 = \frac{6+z}{-2}$

11. $-11 = \frac{a-5}{6}$

12. $\frac{22-w}{3} = -7$

3	9 GEN	TERM1- M1L4
	2025/26	MCQ Use the Distributive Property to simplify expressions

Simplify each expression. If not possible, write *simplified*.

39. $13r + 5r$

40. $3x^3 - 2x^2$

41. $7m + 7 - 5m$

42. $5z^2 + 3z + 8z^2$

43. $7m + 2m + 5p + 4m$

44. $6x + 4y + 5x$

45. $3m + 5g + 6g + 11m$

46. $4a + 5a^2 + 2a^2 + a^2$

47. $5k + 3k^3 + 7k + 9k^3$

48. $6x^2 + 14x - 9x$

49. $17g + g$

50. $2x^2 + 6x^2$

51. $7a^2 - 2a^2$

52. $3y^2 - 2y + 9$

53. $3q^2 + q - q^2$

4	9 GEN	TERM1- M2L4
	2025/26	MCQ Prove that equations are identities or have no solution

Solve each equation and state whether the equation has *one solution*, *no solution*, or is an *identity*.

25. $-6y - 3 = 3 - 6y$

26. $\frac{1}{2}(x+6) = \frac{1}{2}x - 9$

27. $8q + 12 = 4(3 + 2q)$

28. $21(x + 1) - 6x = 15x + 21$

29. $12y + 48 - 4y = 8(y - 6)$

30. $8(z + 6) = 4(2z + 12)$

5	9 GEN	TERM1- M1L1
	2025/26	MCQ Evaluate numerical expressions by using the order of operations

Evaluate each expression.

30. 7^2

31. 14^3

32. 2^6

33. $35 - 3 \cdot 8$

34. $18 \div 9 + 2 \cdot 6$

35. $10 + 8^3 \div 16$

36. $[(6^3 - 9) \div 23]4$

37. $\frac{8 + 3^3}{12 - 7}$

38. $\frac{(1 + 6)9}{5^2 - 4}$

39. $4(16 \div 2 + 6)$

40. $13 - \frac{1}{3}(11 - 5)$

41. $(5 \cdot 2 - 9) + 2 \cdot \frac{1}{2}$

6	9 GEN	TERM1-M4L3
	2025/26	MCQ Rewrite linear equations in slope-intercept form

Write an equation of a line in slope-intercept form with the given slope and *y*-intercept.

1. slope: 5, *y*-intercept: −3

2. slope: −2, *y*-intercept: 7

3. slope: −6, *y*-intercept: −2

4. slope: 7, *y*-intercept: 1

5. slope: 3, *y*-intercept: 2

6. slope: −4, *y*-intercept: −9

7. slope: 1, *y*-intercept: −12

8. slope: 0, *y*-intercept: 8

7	9 GEN	TERM1-M4L5
	2025/26	MCQ Construct arithmetic sequences

Find the common difference of each arithmetic sequence. Then find the next three terms.

9. 0.02, 1.08, 2.14, 3.2, ...

10. 6, 12, 18, 24, ...

11. 21, 19, 17, 15, ...

12. $-\frac{1}{2}, 0, \frac{1}{2}, 1, \ldots$

13. $2\frac{1}{3}, 2\frac{2}{3}, 3, 3\frac{1}{3}, \ldots$

14. $\frac{7}{12}, 1\frac{1}{3}, 2\frac{1}{12}, 2\frac{5}{6}, \ldots$

15. 3, 7, 11, 15, ...

16. 22, 19.5, 17, 14.5, ...

17. −13, −11, −9, −7, ...

18. −2, −5, −8, −11, ...

8	9 GEN	TERM1-M4L5
	2025/26	MCQ — Construct arithmetic sequences

Determine whether each sequence is an arithmetic sequence.

1. $-3, 1, 5, 9, \ldots$
2. $\frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{7}{16}, \ldots$
3. $-10, -7, -4, 1, \ldots$
4. $-12.3, -9.7, -7.1, -4.5, \ldots$
5. $4, 7, 9, 12, \ldots$
6. $15, 13, 11, 9, \ldots$
7. $7, 10, 13, 16, \ldots$
8. $-6, -5, -3, -1, \ldots$

9	9 GEN	TERM1-M1L3
	2025/26	MCQ — Recognize the properties of equality and identity

Identify the property of equality used to justify each statement.

1. If $4 + 17 = 21$, then $21 = 4 + 17$.
2. $x + 3 = x + 3$
3. If $16 = 9 + 7$, then $9 + 7 = 16$.
4. If $6 + 2 = 4 + 4$ and $4 + 4 = 8$, then $6 + 2 = 8$.

Use the given property of equality to complete each statement.

5. If $23 + 14 = 37$, then $37 = 23 +$ ___?___ ;
   Symmetric Property of Equality
6. If $a + 5 = b + 3$ and $a + 5 = 12$, then $b + 3 =$ ___?___ ;
   Transitive Property of Equality
7. If $34 = 19 + 15$, then $19 + 15 =$ ___?___ ;
   Symmetric Property of Equality
8. $b + 5 + 12 =$ ___?___ ;
   Reflexive Property of Equality

10	9 GEN	TERM1- M2L6
	2025/26	MCQ Solve proportions

Solve each proportion. If necessary, round to the nearest hundredth.

1. $\frac{3}{8} = \frac{15}{a}$

2. $\frac{t}{2} = \frac{6}{12}$

3. $\frac{4}{9} = \frac{13}{q}$

4. $\frac{15}{35} = \frac{g}{7}$

5. $\frac{7}{10} = \frac{m}{14}$

6. $\frac{8}{13} = \frac{v}{21}$

7. $\frac{w}{2} = \frac{4.5}{6.8}$

8. $\frac{1}{0.19} = \frac{12}{n}$

9. $\frac{2}{0.21} = \frac{8}{n}$

10. $\frac{2.4}{3.6} = \frac{k}{1.8}$

11. $\frac{t}{0.3} = \frac{1.7}{0.9}$

12. $\frac{7}{1.066} = \frac{z}{9.65}$

13. $\frac{x-3}{5} = \frac{6}{10}$

14. $\frac{7}{x+9} = \frac{21}{36}$

15. $\frac{10}{15} = \frac{4}{x-5}$

11	9 GEN	MCQ	TERM1-M2L4
	2025/26		Solve equations with the variable on each side

Solve each equation.

1. $7c + 12 = -4c + 78$

2. $2m - 13 = -8m + 27$

3. $9x - 4 = 2x + 3$

4. $6 + 3t = 8t - 14$

5. $\frac{b-4}{6} = \frac{b}{2}$

6. $\frac{3v+12}{6} = \frac{4v}{3}$

7. $2(r + 6) = 4(r + 4)$

8. $6(n + 5) = 3(n + 16)$

9. $5(g + 8) - 7 = 117 - g$

10. $12 - \frac{4}{5}(x + 15) = \left(\frac{2}{5}x + 6\right)$

12	9 GEN	TERM1-M2L1
	2025/26	MCQ Translate sentences into equations

Translate each sentence into an equation or formula.

9. Twice a increased by the cube of a equals b.

10. Seven less than the sum of p and t is as much as 6.

11. The sum of x and its square is equal to y times z.

12. Four times the sum of f and g is identical to six times g.

13. The area A of a square is the length of a side ℓ squared.

14. The perimeter P of a triangle is equal to the sum of the lengths of sides a, b, and c.

13	9 GEN	TERM1- M2L6
	2025/26	MCQ Solve proportions

40. SHOPPING Stevenson's Market is selling 3 packs of stylus pens for $5.00. How much will 10 packs of stylus pens cost at this price?

41. STATE YOUR ASSUMPTION During basketball practice, Brent made 36 free throws in 3 minutes.

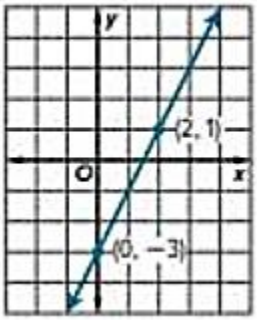
42. **NAILS** Human fingernails grow at an average rate of 3.47 millimeters per month. How much will they grow in 20 months?

43. **PICTURE** Jasmine enlarged the size of a picture to a height of 15 inches. What is the new width of the picture if it was originally 6 inches wide by 4 inches tall?

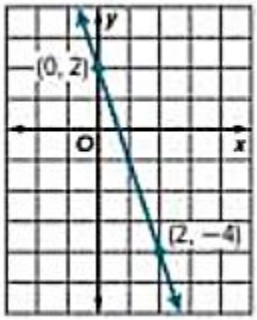
14	9 GEN	TERM1- M4L4
	2025/26	MCQ Graph and interpret linear functions.

Write an equation in slope-intercept form for each graph shown.

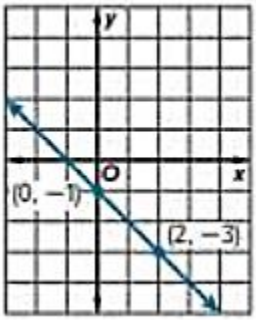
37.



38.



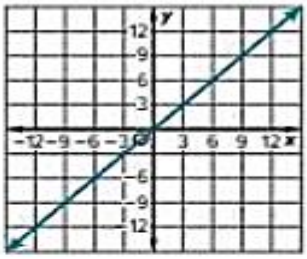
39.



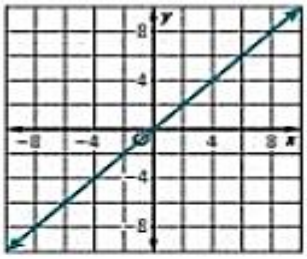
15	9 GEN	TERM1- M4L5
	2025/26	MCQ Apply translations to linear functions

Describe the translation in each function as it relates to the graph of the parent function.

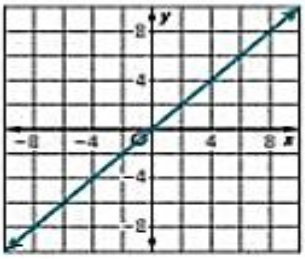
1. $g(x) = x + 11$



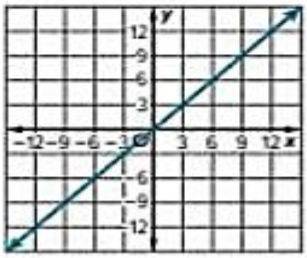
2. $g(x) = x - 8$



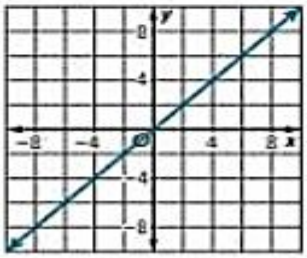
3. $g(x) = (x - 7)$



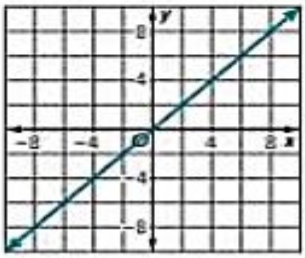
4. $g(x) = (x + 12)$



5. $g(x) = (x + 10) - 1$



6. $g(x) = (x - 9) + 5$



16	9 GEN	TERM1-M1L2
	2025/26	MCQ Write verbal expressions for algebraic expressions

Write an algebraic expression for each verbal expression.

22. x more than 7

23. a number less 35

24. 5 times a number

25. one third of a number

26. f divided by 10

27. the quotient of 45 and r

28. three times a number plus 16

29. 18 decreased by 3 times d

30. k squared minus 11

31. 20 divided by t to the fifth power

32. the sum of a number and 10

33. 15 less than the sum of k and 2

34. the product of 18 and q

35. 6 more than twice m

17	9 GEN	TERM1-M1L4
	2025/26	MCQ Use the Distributive Property to evaluate expressions

Rewrite each expression using the Distributive Property. Then simplify.

23. $2(x + 4)$

24. $(5 + n)3$

25. $(4 - 3m)8$

26. $-3(2x - 6)$

27. $(2 - 4n)17$

28. $11(4d + 6)$

29. $\left(\frac{1}{3} - 2b\right)27$

30. $4(8p + 16q - 7r)$

18	9 GEN	MCQ	TERM1- M4L2
	2025/26		Calculate and interpret slope

Find the slope of the line that passes through each pair of points.

11. (4, 3), (−1, 6)

12. (8, −2), (1, 1)

13. (2, 2), (−2, −2)

14. (6, −10), (6, 14)

15. (5, −4), (9, −4)

16. (11, 7), (−6, 2)

17. (−3, 5), (3, 6)

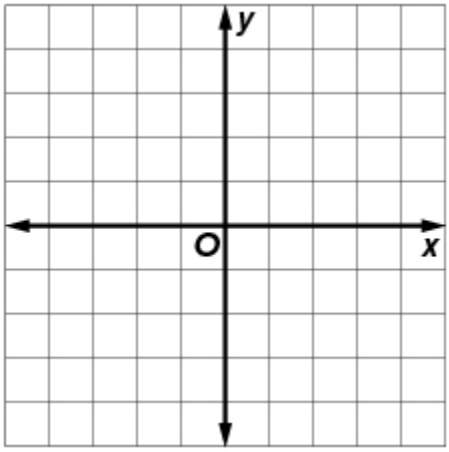
18. (−3, 2), (7, 2)

19. (8, 10), (−4, −6)

19	9 GEN	MCQ	TERM1- M4L6
	2025/26		Identify and graph step functions

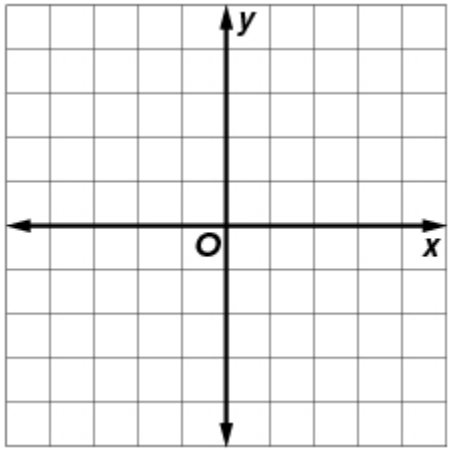
Graph $f(x) = [x - 2]$ by making a table. Copy and complete the table. Then graph the function.

x	$x - 2$	$[x - 2]$
−1	−3	
−0.75	−2.75	
−0.25	−2.25	−3
0	−2	−2
0.25	−1.75	−2
0.5	−1.5	
1	−1	
1.25	−0.75	−1
1.5	−0.5	
2	0	
2.25	0.25	



Graph $f(x) = [x + 1]$. State the domain and range.

x	$x + 1$	$[x + 1]$
−2	−1	
−1.75	−0.75	
−1.25	−0.25	
−1	0	
−0.5	0.5	
−0.25	0.75	
0	1	
0.25	1.25	
0.5	1.5	
1	2	
1.25	2.25	
1.75	2.75	



18. STRUCTURE Suppose $f(x) = 2[x - 1]$.

a. Find $f(1.5)$.

b. Find $f(2.2)$.

c. Find $f(9.7)$.

d. Find $f(-1.25)$.

20	9 GEN	TERM1-M2L2
	2025/26	MCQ Solve equations by using multiplication and division

Solve each equation.

43. $12z = 108$

44. $-7t = 49$

45. $18f = -216$

46. $-22 = 11v$

47. $-6d = -42$

48. $96 = -24a$

49. $\frac{c}{4} = 16$

50. $\frac{a}{16} = 9$

51. $-84 = \frac{d}{3}$

52. $-\frac{d}{7} = -13$

53. $\frac{t}{4} = -13$

54. $31 = -\frac{1}{6}n$

21	9 GEN	FRQ	TERM1 – M1L2
	2025/26		Evaluate algebraic expressions by using the order of operations

Evaluate each expression if $g = 2$, $r = 3$, and $t = 11$.

42. $g + 6t$

43. $7 - gr$

44. $r^2 + (g^3 - 8)^5$

45. $(2t + 3g) \div 4$

46. $t^2 + 8rt + r^2$

47. $3g(g + r)^2 - 1$

Evaluate each expression if $a = 8$, $b = 4$, and $c = 16$.

48. $a^2bc - b^2$

49. $\frac{c^2}{b^2} + \frac{b^2}{a^2}$

50. $\frac{2b + 3c^2}{4a^2 - 2b}$

51. $\frac{3ab + c^2}{a}$

52. $\left(\frac{a}{b}\right)^2 - \frac{c}{a - b}$

53. $\frac{2a - b^2}{ab} + \frac{c - a}{b^2}$

22	9 GEN	FRQ	TERM1- M2L7
	2025/26		Solve equations for specific variables. (2-7)

19. **RECTANGLES** The formula $P = 2\ell + 2w$ represents the perimeter of a rectangle. In this formula, ℓ is the length of the rectangle and w is the width.

a. Solve the formula for ℓ.

b. Find the length when the width is 4 meters and the perimeter is 36 meters.

20. **BASEBALL** The formula $a = \frac{h}{b}$ can be used to find the batting average a of a batter who has h hits in b times at bat.

a. Solve the formula for b.

b. If a batter has a batting average of 0.325 and has 39 hits, how many times has the player been at bat?

21. **SHOPPING** Thomas went to the store to buy videogames for \$13.50 each and controllers. The total amount Thomas spent can be represented by $c = 13.50g + p$, where c is the total cost, g is the number of games he bought, and p is the cost of the controllers. The controllers cost \$55 and Thomas spent \$136 total.

a. Solve the formula for g.

b. Find how many games Thomas bought.

22. **GEOMETRY** The volume of a box V is given by the formula $V = \ell wh$, where ℓ is the length, w is the width, and h is the height.

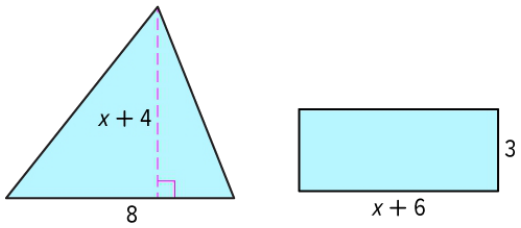
a. Solve the formula for h.

b. What is the height of a box with a volume of 50 cubic meters, length of 10 meters, and width of 2 meters?

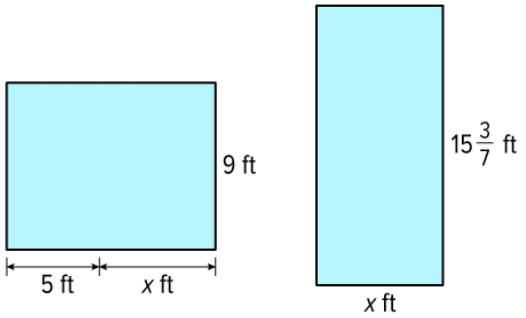
23	9 GEN	FRQ	TERM1-M2L4
	2025/26		Solve equations by applying the Distributiv Property

21. **GEOMETRY** Supplementary angles are two angles with measures that have a sum of 180º. Complementary angles are two angles with measures that have a sum of 90º. The measure of the supplement of an angle is 10º more than twice the measure of the complement of the angle. Let $90 - x$ equal the degree measure of the complement angle and $180 - x$ equal the degree measure of the supplement angle. Write and solve an equation to find the measure of the angle.

22. **GEOMETRY** Write and solve an equation to find the value of x so that the figures have the same area.

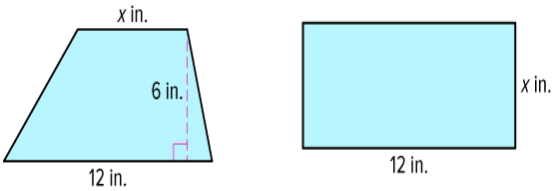


23. **GEOMETRY** Write and solve an equation to find the value of x so that the figures have the same area.



24. **GEOMETRY** Write and solve an equation to find the value of x so that the figures have the same area.

The area of a trapezoid is $\frac{1}{2}h(b_1 + b_2)$

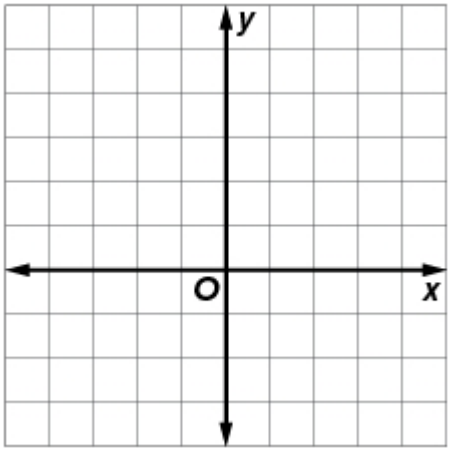


24	9 GEN	FRQ	TERM1-M4L1
	2025/26		Graph linear functions by using the x- and y-intercepts

Graph each equation by using the *x*-and *y*- intercepts.

9. $y = 4 + 2x$

x	y



To find the x-intercept, let y = 0.

$y = 4 + 2x$	Original equation
$0 = 4 + 2x$	Replace y with 0.
$-4 = 2x$	Subtract 4 from each side.
$-2 = x$	Divide each side by 2.

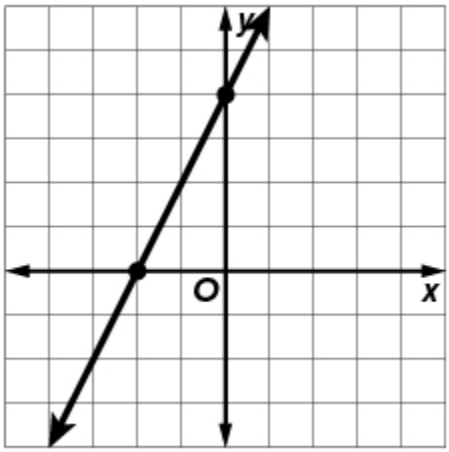
This means that the graph intersects the x-axis at (–2, 0).

To find the y-intercept, let $x = 0$

$y = 4 + 2x$	Original equation
$y = 4 + 2(0)$	Replace x with 0.
$y = 4$	Simplify.

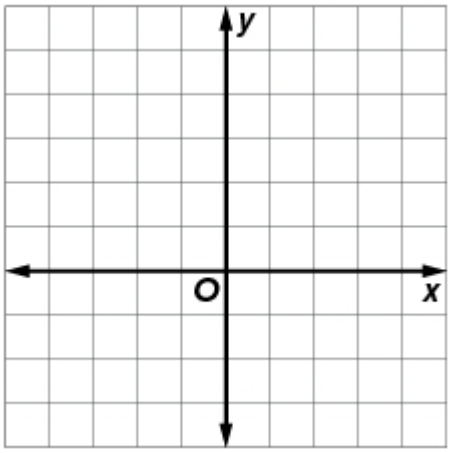
This means that the graph intersects the y-axis at (0,4).

Graph the x-intercept. Graph the y-intercept. Draw a line through the points.



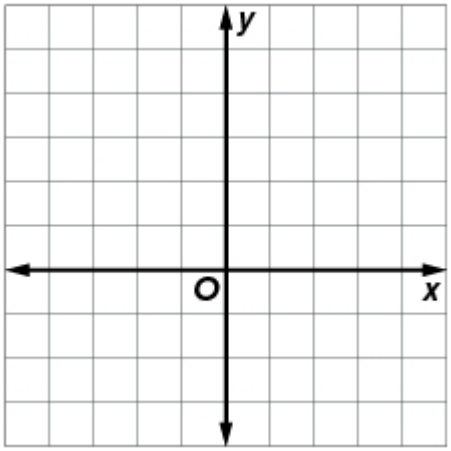
10. $5 - y = -3x$

x	y



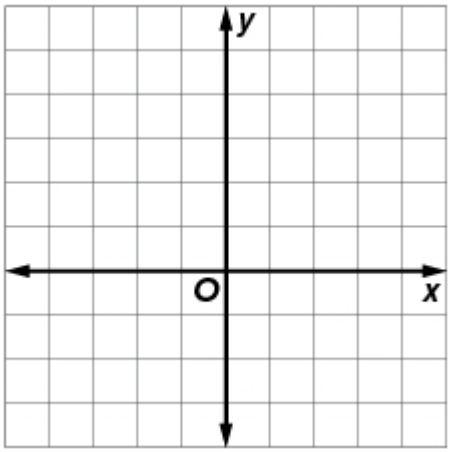
11. $x = 5y + 5$

x	y



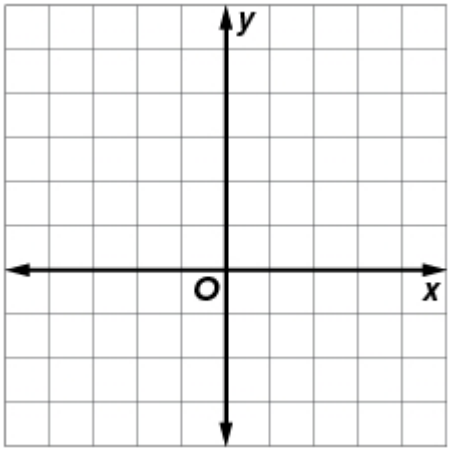
12. $x + y = 4$

x	y



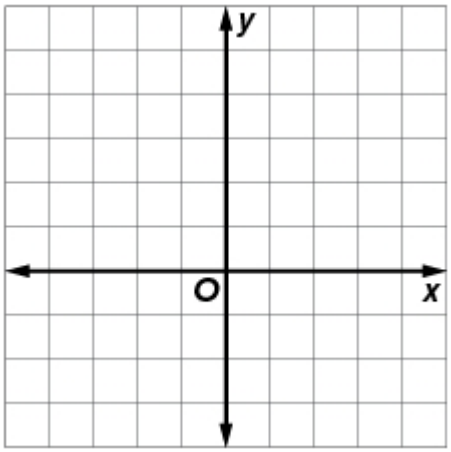
13. $x - y = -3$

x	y



14. $y = 8 - 6x$

x	y



.

25	9 GEN	FRQ	TERM1
	2025/26		Calculate and interpret rate of change.

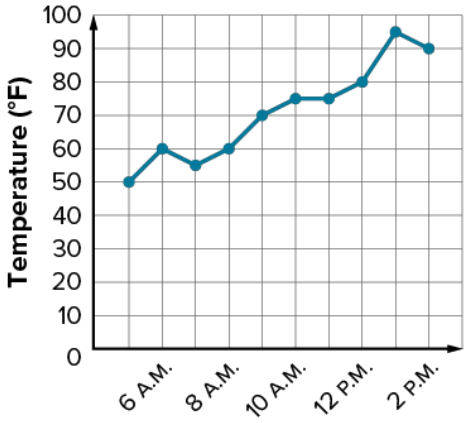
3. **POPULATION DENSITY** The table shows the population density for the state of Texas in various years. Find the average annual rate of change in the population density from 2000 to 2009.

Population Density	
Year	**People Per Square Mile**
1930	22.1
1960	36.4
1980	54.3
2000	79.6
2009	96.7

4. **BAND** In 2012, there were approximately 275 students in the Delaware High School band. In 2018, that number increased to 305. Find the annual rate of change in the number of students in the band.

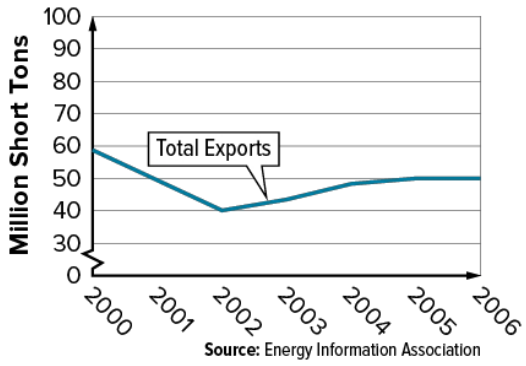
5. **TEMPERATURE** The graph shows the temperature in a city during different hours of one day.

a. Find the rate of change in temperature between 6 A.M. and 7 A.M. and describe its meaning in the context of the situation.



b. Find the rate of change in temperature from 1P.M. and 2 P.M. and describe its meaning in the

6. **COAL EXPORTS** The graph shows the annual coal exports from U.S. mines in millions of short tons.



a. Find the rate of change in coal exports between 2000 and 2002 and describe its meaning in the context of the situation.

b. Find the rate of change in coal exports between 2005 and 2006 and describe its meaning in the context of the situation.