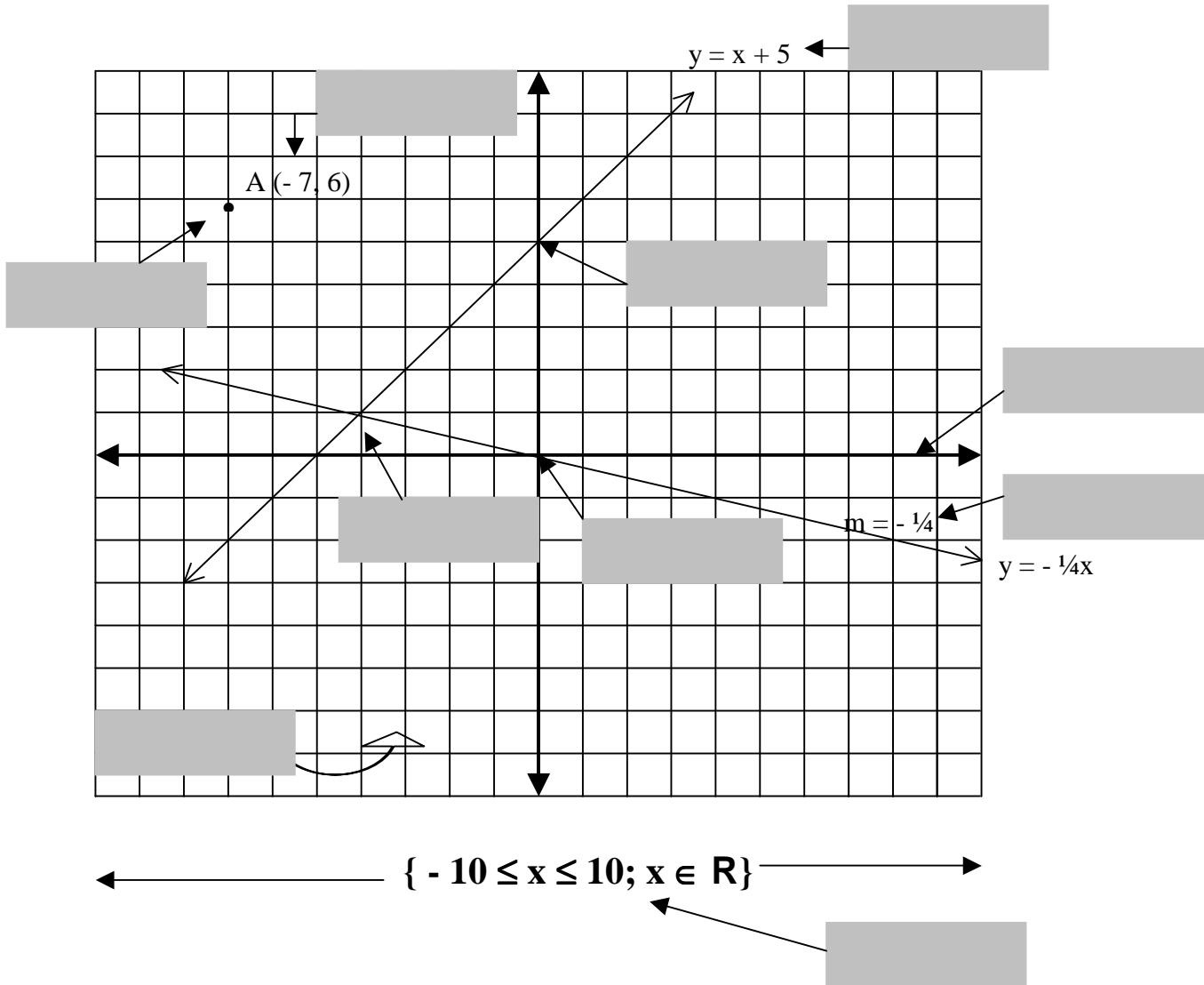


9. Given the following template – supply the appropriate terminology for each item indicated by a light gray box.



HINT						
domain	axis	origin	point	quadrant	slope	intercept
	ordered pair		equation of a line		intersection	

10. Find the equation of the line. State answer in $y = mx + b$ form

- a) on (7, 1) with slope $-\frac{2}{3}$
- b) through (2, -3) and (-6, -2)
- c) with x intercept (5, 0) and y intercept (0, 2)
- d) through (5, 4) and same slope as $4y = -3x + 1$
- e) through (4, -3) and parallel to $5x + 4y + 3 = 0$
- f) On (-2, 6) and perpendicular to $x - 2y = 6$
- g) With same x intercept as $3x + 4y - 6 = 0$ and with slope 7
- h) With same y intercept as $x - y + 2 = 0$ and $m = -5$
- i) On (-2, 3) with slope of 0
- j) through (-1, -4) with undefined slope

a) $y = \frac{-2}{3}x + \frac{17}{3}$	e) $y = \frac{-5}{4}x + 2$
b) $y = \frac{-1}{8}x - \frac{11}{4}$	f) $y = -2x + 10$
c) $y = \frac{-2}{5}x + 2$	g) $y = 7x - 14$
d) $y = \frac{-3}{4}x + \frac{31}{4}$	h) $y = -5x + 2$
	i) $y = 3$
	j) $x = -1$

11. . Decide whether points P(-2, -1) and Q(5, -8) lie on the same circle with center (1, -5).
Give reasons for your answer.

length of PO is 5 units, length of QO is 5 units. since $PO = QO$ they are radii of the same point of origin (circle)

12. What are the coordinates of the points which divide a line segment with endpoints (-10, -16) and (2, 24) into 4 equal parts?

(-10, -16) (-7, -6) (-4, 4) (-1, 14) (2, 24)

13. Given endpoints A(-2, 5) and B(-8, -13)

- a) find the midpoint of AB
- b) find the length of AB

midpoint_{AB} (-5, -4)
length_{AB} 18.9737 or $\sqrt{360}$

14. Show triangle ABC with vertices A(-3, 1) B(1, 7) and C(5, 1) is isosceles.

	AB	BC	AC	
length	$\sqrt{52}$ or 7.2111	$\sqrt{52}$ or 7.2111	8	two congruent sides = isosceles triangle

15. Prove the triangle with vertices M(3, 3) N(8, 17) and P(11, 5) is a right triangle.

A right triangle has one vertex of 90° ~ thus they have negative reciprocals for slopes.

slope MN = $\frac{14}{5}$ slope NP = $\frac{-4}{1}$ slope MP = $\frac{1}{4}$ slope of NP and slope MP are negative reciprocals therefore we have a right angled triangle