Jeddah Knowledge International School

Math Revision Pack
2014-2015
Quarter 3
Grade 9

Name: _____

Section: _____

Math Q3 Review Pack, Grade 9

1. **Make x the subject of the formula:**

$5x+2y=d$	$Y=\dfrac{x-3}{x+2}$	$Y=3x^2+7$	$Y=4(2x+3)$

2. Solve each set of simultaneous equations, choose any appropriate method:

a) $3x + y = 17$ $\quad 3x - y = 13$	c) $y-2x=3$ $\quad y=5-2x$
b) $3x + 4y = 12$ $\quad 2x + y = 8$	d) $5+10x=-2y$ $\quad 4y-20x=10$

3. The sum of two numbers is 50. The first number is 43 less than twice the second number. Write and solve a system of equations to find the two numbers.

4. Let x be the number of apple-pies & y that of strawberry-pies, the following system of equations interprets the given:

x+y= 15

150x+200y=2600

What is the value of x &y?

5. Rana and Hadia went to Jarir Bookshop to buy some magazines for their math class. Rana got 3 Algebra magazines and 2 Geometry magazines for 13 SR, while Hadia paid 24 SR for 5 Algebra magazines and 4 Geometry magazines. Find the cost of the Algebra& the Geometry magazines.

6. Expand & simplify:

a)$(3x - 4)^2$	b) $7(2x -1) - 2(3 - x)$
c)$(2x+1)^2 - (x-3)^2$	d)$(3x - 4y)(3x + 4y)$

7. Factorize completely:

$2n^4 + n^3$	$49p^4 - 9q^6$	$7x^3 + 21x^2 + 2x + 6$
$4y^2 + 8ay - y - 2a$	$3x^2 + 7x + 2$	$x^2 + 10x + 9$

8. Find the value of two numbers if their sum is 12 and their difference is 4.

9. Two small pitchers and one large pitcher can hold 8 cups of water. One large pitcher minus one small pitcher constitutes 2 cups of water. How many cups of water can each pitcher hold?

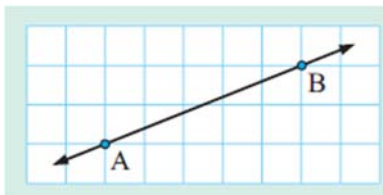10. The school that Lyn goes to is selling tickets to a choral performance.
On the first day of ticket sales the school sold 3 senior citizen tickets and 1 child ticket for a total of $38.
 The school took in $52 on the second day by selling 3 senior citizen tickets and 2 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.
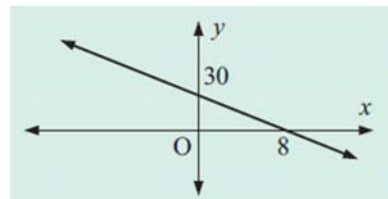
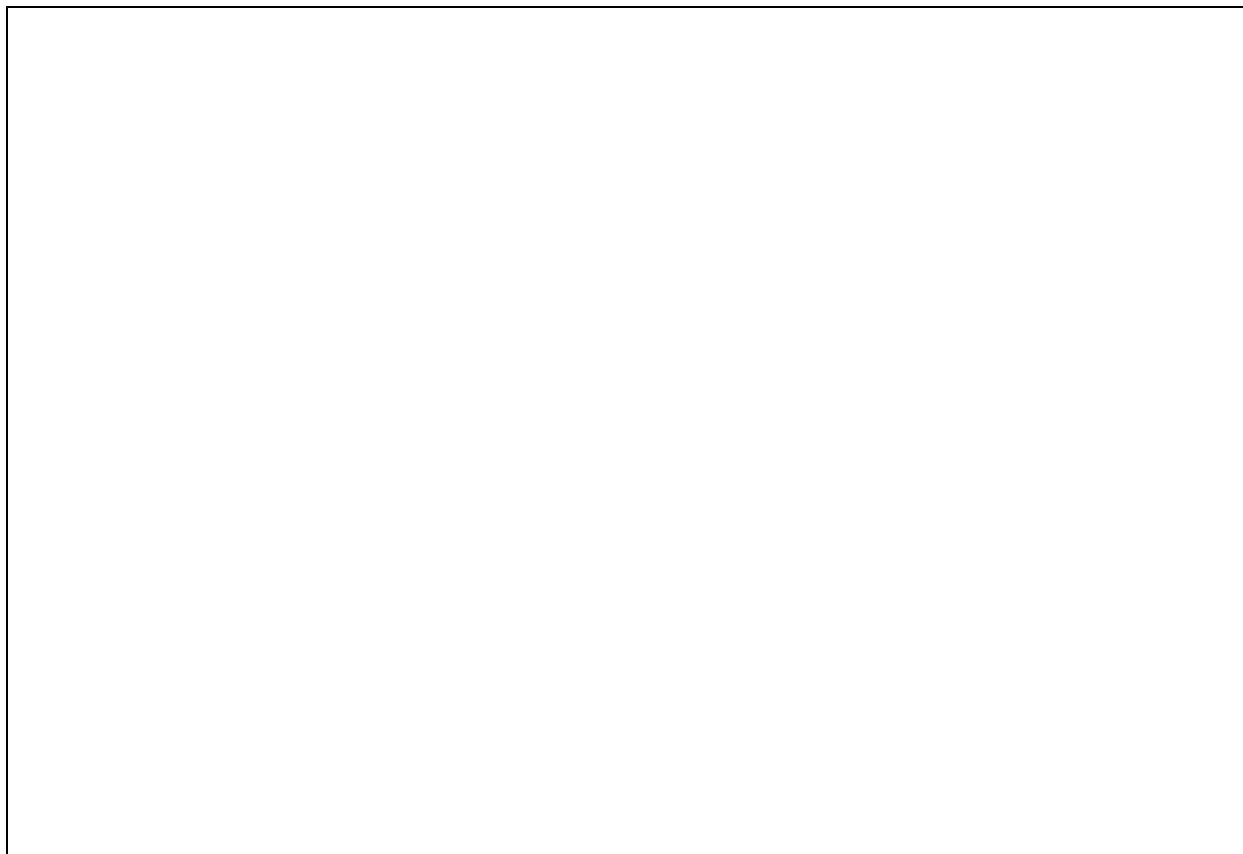11. Find the gradients of the following lines :

Where A(2,1) and B(8,3)

12. **Given A(2,-1), B(-5,3), C(3,4) ,**

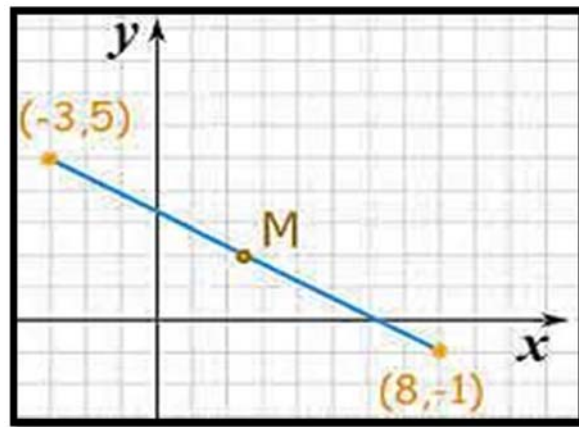   a- Find the lengths of $\overline{AB}$,$\overline{BC}$,$\overline{AC}$

    b- Classify Δ ABC as equilateral, isosceles or scalene.

13. M is the midpoint of $\overline{CD}$. The coordinates M (-1,1) and C(1,-3) are given.
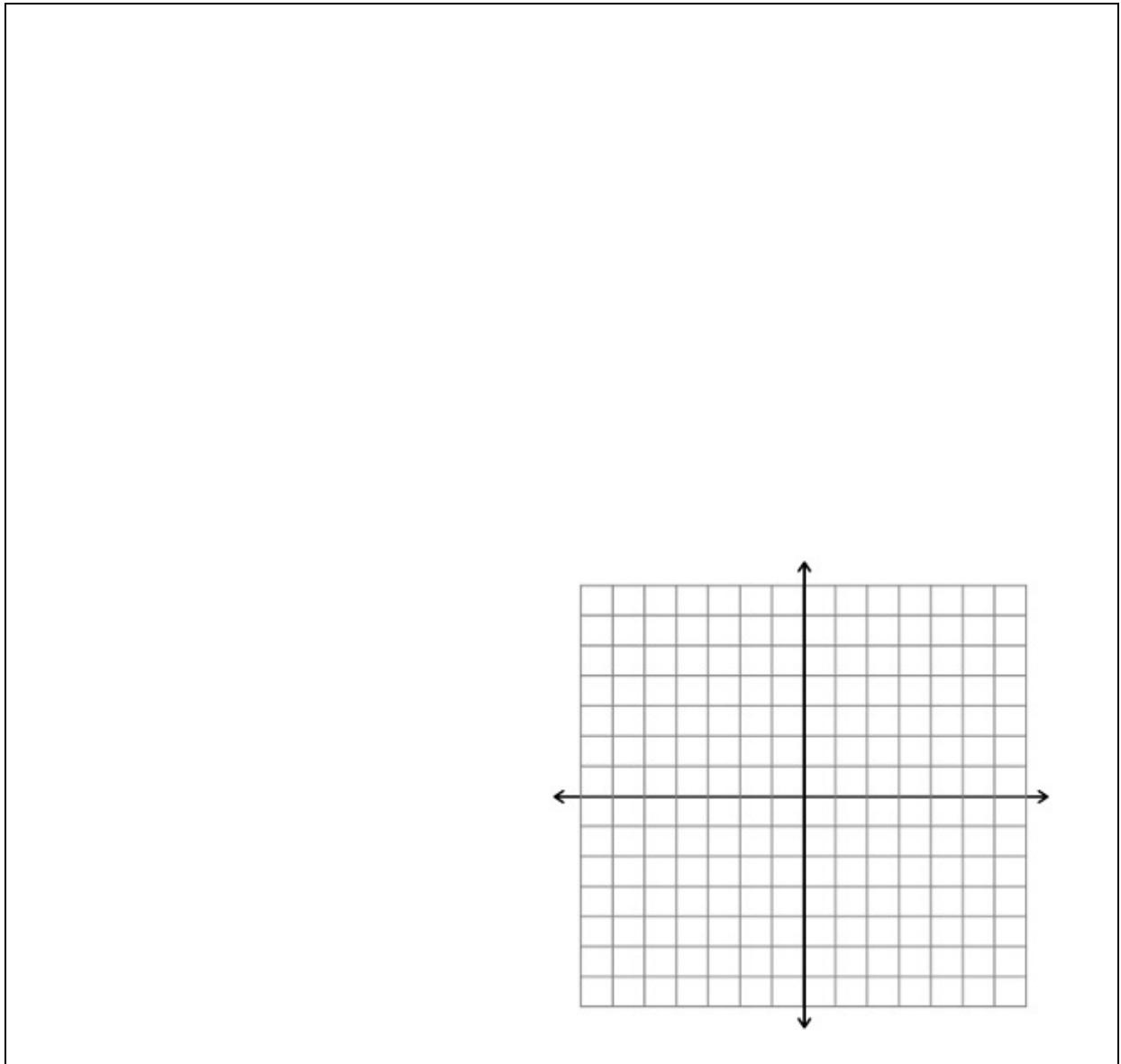   Find the coordinates of point D.

14. the following graph where A(-3,5) and B(8,-1)

a) Find the coordinate of the Midpoint M of the line segment $\overline{AB}$.

b) Find the distance between the 2 points A and B.

c) Calculate the gradient of the line $\overleftrightarrow{AB}$

d) Write the gradient of a line (L) perpendicular to $\overleftrightarrow{AB}$.

N.B: Remember always to show your work ☺

15. Use **graphical** methods to find where the lines $x + y = 6$ and $2x - y = 6$ meet.

ADVICE

Prepare well for your Exams ☺