Math 8CP
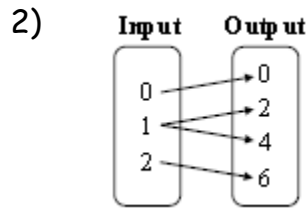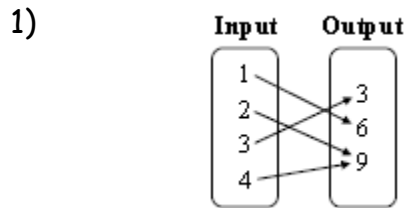**Chapter 6 Practice Test**   <u>Complete in Spiral</u>

For each mapping diagram, write the ordered pairs. Then determine whether the relation is also a function.

1)

Input	Output
1	3
2	6
3	9
4	

2)

Input	Output
0	0
1	2
2	4
	6

3) Draw a mapping diagram for the set of ordered pairs. $(-5, 3), (-3, 1), (2, 1), (6, 3)$

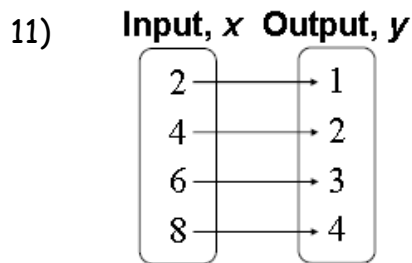**Graph each equation.**

4) $y = -2x + 3$ 5) $y = \dfrac{2}{5}x - 6$ 6) $y = x - 2$

For problems 7-14, write an equation in slope-intercept form for each situation.

7)   The output is twelve more than the input.

8)   The output is seven less than the input.

9)   The output is two more than three times the input.

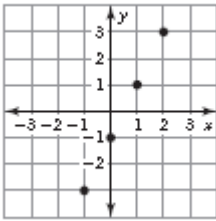10)   The output is the quotient of the input and five.

11)   **Input, x   Output, y**

Input, x	Output, y
2	1
4	2
6	3
8	4

12)

x	1	2	3	4	5
y	4	8	12	16	20

13)

x	-2	0	2	4
y	-8	-5	-2	1

14)

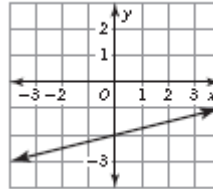| x	0	2	4	6
y	2	0	-2	-4

Write an equation in slope-intercept form for each situation.

15)

16)

Solve for y when given the indicated value for x.

17) $y = x + 7; \quad x = -5$

18) $y = 6x - 3; \quad x = 4$

19) $y = \dfrac{1}{3}x - 9; \quad x = 6$

20) $y = -2x + 8; \quad x = -4$

Solve for x when given the indicated value for y.

21) $y = 2x - 6; \quad y = 33$

22) $y = \dfrac{1}{2}x + 15; \quad y = 12$

23) Use the following situation to answer the questions.
The table shows the cost y in dollars of x ounces of coffee.
   a) What is the input?   What is the output?
   b) Write a linear function for the table.
   c) How much does it cost to purchase 32 ounces of coffee?
   d) How many ounces of coffee can you purchase for $4?

Fluid Ounces, x	0	8	16	24
Cost, y	0	0.5	1	1.5

24) Use the following situation to answer the questions.
Your earnings are represented by the function $y = 7x + 12$
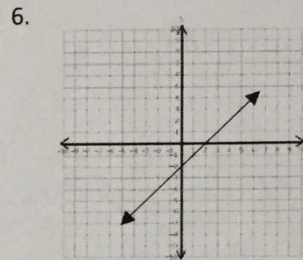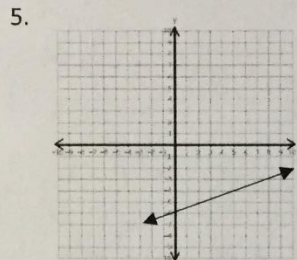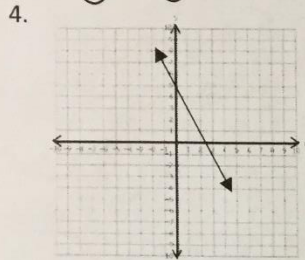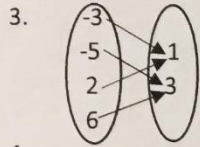Your friend's earnings are listed in the table.
   a) Write an equation for your friend's earnings.
   b) Who earns more money per hour?
   c) Graph both functions on the SAME GRID. (Only use positive numbers. Label axes)
   d) After how many hours do you and your friend earn the same amount of money?
   e) How many hours do YOU need to work if you want to buy a new phone for $362?

Time (hours)	1	2	3	4
Earnings ($)	9	18	27	36

KEY to Chapter 6 Practice Test

1. $(1, 6), (2, 9), (3, 3), (4, 9)$; Yes, it is a function because each input has exactly one output.
2. $(0, 0), (1, 2), (1, 4), (2, 6)$; No, this is not a function because the input of 1 has two different outputs.

Input   Output

3.

4.

5.

6.

7. $y = x + 12$
8. $y = x - 7$
9. $y = 3x + 2$
10. $y = \frac{x}{5}$
11. $y = \frac{x}{2}$ or $y = \frac{1}{2}x$
12. $y = 4x$
13. $y = \frac{3}{2}x - 5$
14. $y = -x + 2$
15. $y = 2x - 1$
16. $y = \frac{1}{4}x - 2$
17. 2
18. 21
19. -7
20. 16
21. 19.5 or $\frac{39}{2}$
22. -6
23. A. The input is the number of fluid ounces. The output is the cost.
   B. $y = \frac{1}{16}x$
   C. $2.00
   D. 64 ounces of coffee
24. A. $y = 9x$
   B. Your friend earns more money per hour
   C. see graph
   D. 6 hours
   E. 50 hours

• $y = 7x + 12$
• $y = 9x$