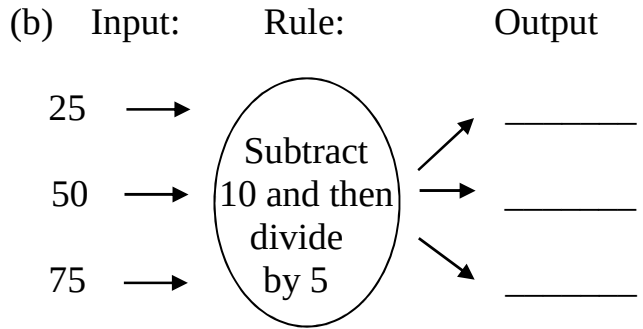
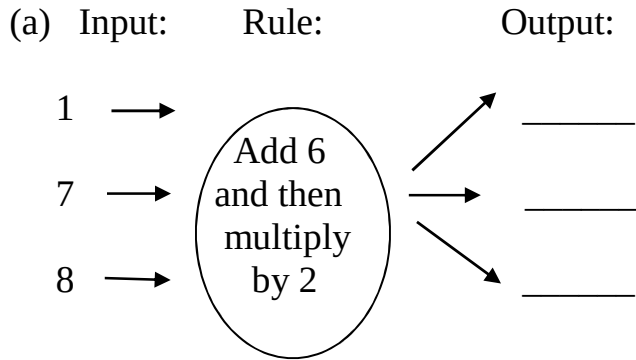
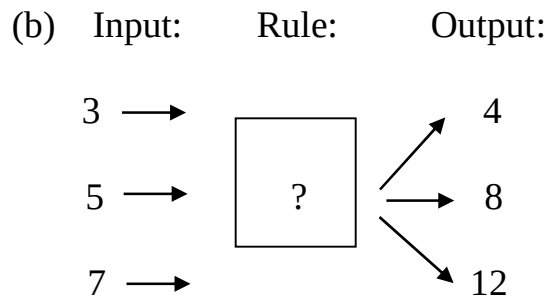
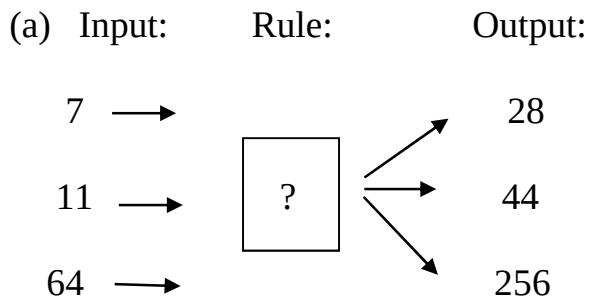


Exercise 2015-7 EE-00002(1) Functions and graphs

(1) Complete the output of the given flowcharts after the given rule has been applied:



(2) Determine the rule applied in each of the following cases, to obtain the output number:



(3) Complete the following tables:

(a)

n	1	2	5	7		11	20
$28 - n$	27			21	20		

(b)

x	1	2	5	6		11	20
x^2	1				64		

(4) Write down the relationship between x and the bottom number in the following tables and then complete the tables:

(a)

x	1	2	3	4	5	6	7
?	5		15			30	

(b)

x	18	30	48	60	72	660	18 000
?	3	5		10			

- (5) The distance (km) that a vehicle travelled is calculated by the following formula:
 $\text{Distance (D)} = \text{Speed (S)} \times \text{Time (T)}$
 Time is measured in hours.

Speed (S):	60		60		60		
Time (T):	2	3	4	5	7	8	10
Distance (D):	120	180		300		480	600

- (a) Complete the table.
 (b) Represent the table (time on the horizontal axis and distance on the vertical axis) on a graph.
 (c) Does the vehicle travel at a constant speed? Motivate your answer.
 (d) In which units are the speed measured?
 (e) Use your graph and answer the following questions. Indicate where you made the readings on the graph.
- (i) What distance has been travelled after 6 hours?
 (ii) After how many hours would the vehicle have travelled 450 km?

