Section-1 queries

1. select count(*) as count, Employee.Department
From Employee
INNER JOIN Incentives
ON Employee.Employee_ID = Incentives.
Employee_REF_ID.
group by Employee.Department.

2. Select FIRST NAME, LAST NAME, Department
From Employee
where (Department.salary)
in
(select Department, max(salary) from
Employee group by Department

3. Select FIRST NAME, sum(INCentive_AMOUNT)
From Employee
Join Incentives on Employee_ID = Employee_
REF_ID.
group by Employee_REF_ID.MONTH(INC
ENTIVE_DATE)

4. Select MONTH(INCENTIVE_DATE),
max(SUM(INCENTIVE_AMOUNT))
from Employee Join Incentives on
Employee_ID = Employee_REF_ID
group by MONTH(INCENTIVE_DATE)

5. i) first start by Taking both
7min & 4min together and start.
Let S_1 S_2.

ii) After 4min, S_2 will be full (restart)
and S_1 has 3 min left.

iii) After 7 min, S_2 is left with 1min.
S_1 is full (restart).

iv) After 8 min, S_2 is filled (restart).
S_1 is filled with 6 min,
with 1min left (restart).

v) After 9 min S_1 (7 min) sand timer
is empty from above.
At 9 min both sand timers completely
measured 9 min mark.

6. The pair has 2 children, out of which 1 is girl.

the other is probability of 1/2 of each gender.

In 2 children, there are 4 possibities.

(boy, boy) (boy, girl) (girl, boy) (girl, girl)
1st & 2nd 1st 2nd 1st 2nd

Acc. to question at 1 girl is confirmed.
so, remaining do not consider (boy, boy).

probabity that both are girls is

$= \frac{1}{3}$. [ie exclude (boy, boy) case].

7. I agree with statement.
As stated "Ron's cafe just began
advertising this year through radio"
and delighted to see 10% rise in sales.
They just started promoting through
local radio earlier in the year
and already sales increased by
10% compared to last years. So idea
was a huge revelation to the
increase in business. Radio
advertising platform has helped
them promote to wide range of
locals audience. So, we also saw
in result a 10% increase in sales.