

66

1. True, each entity maps to exactly one table.
2. False, a relationship shows a connection between at least two tables
3. C B A relationship will become a table if a linking table is necessary otherwise it will become a file in one table referencing the other table.
4. B C
5. See last page

6a.

Starship

Name	Crew	Location	Engine_ID (FK to Engine)	Lab (FK to Lab)
SuperShip	1	Earth	1	Space Runners
Awesome-O	2	Mars	3	Black Hole Industries
M. Falcon	3	Earth	2	EngineTech

Lab

Name	Sector
EngineTech	D
Space Runners	C
Black Hole Industries	F

Engine

ID	Name	Max_Warp	Created_By (FK to Lab)
1	Superspeed	10	EngineTech
2	Anti-gravity	5	Black Hole Industries
3	Hamster powered	1	Space Runners

6b.

```
create table Lab (  
  Name varchar(10) primary key,  
  Sector varchar(20)  
);
```

```
create table Engine (  
  ID number(5,0) primary key,  
  Name varchar(20),  
  Max_Warp number(5,0), not null  
  Created_By varchar(10) references Lab on delete set null cascade  
);
```

```
create table Starship (  
  Name varchar(20) primary key,  
  Crew number(5,0),  
  Location varchar(20), not null  
  Engine_ID number(5,0) references Lab on delete set null cascade  
  Lab varchar(10) references Lab on delete set null cascade  
);
```

(-3)

```
insert into Lab values ('EngineTech','D');  
insert into Lab values ('Space Runners','C');  
insert into Lab values ('Black Hole Industries','F');
```

```
insert into Engine values (1,'Superspeed',10,'EngineTech');  
insert into Engine values (2,'Anti-gravity',5,'Black Hole Industries');  
insert into Engine values (3,'Hamster powered',1,'Space Runners');
```

```
insert into Starship values ('Supership',1,'Earth',1,'Space Runners');  
insert into Starship values ('Awesome-O',2,'Mars',3,'Black Hole Industries');  
insert into Starship values ('M. Falcon',3,'Earth',2,'EngineTech');
```

5.)

