Relation 1

Given the relation with sample data below, find all possible functional dependencies.

GradeBook

ID	Name	Major	Quiz1	Quiz2	Quiz3	Quiz4	Total	Grade
001	Harry	Magic	90	90	80	100	360	A-
002	Hermione	Magic	100	100	100	100	400	A
007	Ron	Magic	80	100	70	100	350	B+
301	Dobby	Service	95	95	95	95	380	A
302	Severus	Education	90	90	99	100	379	A
399	Albus	Management	100	100	99	100	399	A

ANSWER:

FD1: ID -> Name, Major, Quiz1, Quiz2, Quiz3, Quiz4, Grade, Total.

FD2: Quiz1+Quiz2+Quiz3+Quiz4 -> Total.

FD3: Total -> Grade

Relation 2

Given the relation with sample data below, find all possible functional dependencies.

ProductDetails

SKU	Name	VendorID	Price	Date	Quantity	Location	Description
KB320	MouseMat	V1230	13.32	01/01/2019	3000	A3	Discontinued
YZ783	MouseMat	V3002	10.00	03/01/2019	1000	A3	Discontinued
IU990	Mouse	V3333	19.00	12/01/2019	700	A1	
IU370	Mouse	V3333	15.00	01/01/2020	500	A1	
YZ783	MouseMat	V3012	9.90	05/01/2020	1000	A3	
YZ783	MouseMat	V3012	8.90	05/01/2021	1000	A3	

ANSWER:

FD1: SKU -> Name.

SKU, VendorID, Date -> Price, Quantity, Location, Description.