Exercise 1 $\prod_{Sname}(\sigma_{color="red"}(parts) \bowtie Suppliers)$

$\prod_{SID}(\sigma_{color="red"}(parts) \bowtie \sigma_{color="green"}(parts) \bowtie Suppliers)$

$\prod_{SID}(\sigma_{color="red"}(parts) \bowtie \sigma_{address="221PackerStreet"}(Suppliers))$

$\prod_{SID}(\sigma_{color="red"}(parts) \cap \sigma_{color="green"}(parts) \bowtie Suppliers)$

$\prod_{SID}(\sigma_{Pname="red1"}(parts) \cap \sigma_{Pname="red2"}(parts) \cap \sigma_{Pname="red3"}(parts) \cap$
$\sigma_{Pname="green"}(parts) \cap \sigma_{Pname="blue1"}(parts) \bowtie Suppliers)$

$\prod_{SID}(\sigma_{Pname="red1"}(parts) \cap \sigma_{Pname="red2"}(parts) \cap \sigma_{Pname="red3"}(parts) \bowtie$
$Suppliers)$

$\prod_{SID}(\sigma_{Pname="red1"}(parts) \cap \sigma_{Pname="red2"}(parts) \cap \sigma_{Pname="red3"}(parts) \cap$
$\sigma_{Pname="green"}(parts) \bowtie Suppliers)$

$\prod_{SID}(\sigma_{Pname="red1"}(parts) \cap \sigma_{Pname="red2"}(parts) \cap \sigma_{Pname="red3"}(parts) \cup$
$\sigma_{Pname="green"}(parts) \bowtie Suppliers)$

$\prod_{Catalog1.sid,Catalog2.sid}(\sigma_{Catalog1.pid=Catalog2.pidCatalog1.sid!=Catalog2.sidCatalog1.cost>Catalog2.cost}(Catalog1\times$
$Catalog2))$

$\prod_{Catalog1.sid}(\sigma_{Catalog1.pid=Catalog2.pidCatalog1.sid!=Catalog2.sidCatalog1.cost>Catalog2.cost}(Catalog1\times$
$Catalog2))$

Exercise 2