

```
In[•]:= n = 2
```

```
Out[•]= 2
```

```
In[•]:= coord = {θ, ϕ}
```

```
Out[•]= {θ, ϕ}
```

```
In[•]:= metric = a2 {{1, 0}, {0, Sin[θ]2}}
```

```
Out[•]= {{a2, 0}, {0, a2 Sin[θ]2}}
```

```
In[•]:= inversemetric = Simplify[Inverse[metric]]
```

```
Out[•]= {{1/a2, 0}, {0, Csc[θ]2/a2}}
```

```
In[•]:= affine := affine = Simplify[Table[(1/2)*Sum[(inversemetric[[i, s]])*  
    (D[metric[[s, j]], coord[[k]]] +  
    D[metric[[s, k]], coord[[j]]] - D[metric[[j, k]], coord[[s]]]), {s, 1, n},  
    {i, 1, n}, {j, 1, n}, {k, 1, n}]]
```

```
In[•]:= listaffine :=  
    Table[If[UnsameQ[affine[[i, j, k]], 0], {ToString[Γ[i, j, k]], affine[[i, j, k]]},  
    {i, 1, n}, {j, 1, n}, {k, 1, n}]]
```

```
In[•]:= TableForm[Partition[DeleteCases[Flatten[listaffine], Null], 2],  
    TableSpacing → {2, 2}]
```

```
Out[•]//TableForm=
```

```
Γ[1, 2, 2]  -Cos[θ] Sin[θ]
```

```
Γ[2, 2, 1]  Cot[θ]
```