

```
>> A=Vandermonde(5);  
>> [Qm,Rm]=mgs(A);  
>> [Qc,Rc]=clgs(A);  
>> [Q,R]=qr(A);  
>> [Qp,Rp]=qr_plus(Q,R);  
>> norm(A-Qm*Rm,2)
```

```
ans =
```

```
1.1861e-16
```

```
>> norm(A-Qc*Rc,2)
```

```
ans =
```

```
1.1530e-16
```

```
>> norm(A-Q*R,2)
```

```
ans =
```

```
1.0040e-15
```

```
>> norm(Qm-Qp,2)
```

```
ans =
```

```
1.3330e-14
```

```
>> norm(Qc-Qp,2)
```

```
ans =
```

```
1.7603
```

```
>> norm(Rm-Rp,2)
```

```
ans =
```

```
6.5404e-16
```

```
>> norm(Rc-Rp,2)
```

```
ans =
```

```
1.4815
```

```
>> norm(Qm'*Qm-eye(5),2)
```

```
ans =
```

1.2736e-14

```
>> norm(Qc'*Qc-eye(5),2)
```

ans =

2.8369

```
>> norm(Q'*Q-eye(5),2)
```

ans =

4.7902e-16

```
>>
```