```
---- Problem 3.a ----
MATLAB - norm2(A-QR) =
   1.0144e-15

Householder - norm2(A-QhRh) =
   1.7708e-15

MGS - norm2(A-QmRm) =
     0

norm2(Qh-Q) =
   1.5924e-15

norm2(Rh-R) =
   1.0238e-15

norm2(Qm-Q) =
   2.6317e-14

norm2(Rm-R) =
   5.1851e-16

Householder - norm2(Qh^*Qh - I)
   9.7734e-16

MGS - norm2(Qm^*Qm - I)
   2.6493e-14

MATLAB - norm2(Q^*Q - I)
   7.7604e-16

---- Problem 3.b ----
MATLAB - norm2(A-QR) =
   1.9769e-15

Householder - norm2(A-QhRh) =
   2.3564e-15

MGS - norm2(A-QmRm) =
   1.3636e-15

norm2(Qh-Q) =
   1.1344e-15

norm2(Rh-R) =
   1.2982e-15

norm2(Qm-Q) =
   7.0976e-16

norm2(Rm-R) =
   6.6613e-16

Householder - norm2(Qh^*Qh - I)
   9.0619e-16

MGS - norm2(Qm^*Qm - I)
   7.1498e-16
```

MATLAB — norm2(Q^*Q — I)
    4.4314e—16

>>