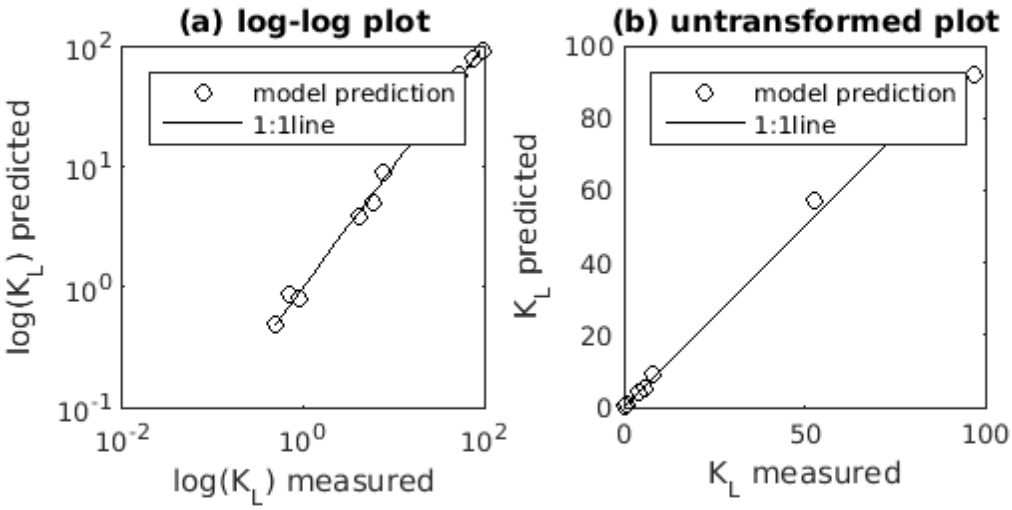
```
% Compute best fit of transformed values
clc; format short g
U = [0.5 2 10 0.5 2 10 0.5 2 10]';
H = [0.15 0.15 0.15 0.3 0.3 0.3 0.5 0.5 0.5]';
KL = [0.48 3.9 57 0.85 5 77 0.8 9 92]';
logU = log10(U);
logH = log10(H);
logKL= log10(KL);
Z = [ones(size(logKL)) logU logH];
a = (Z'*Z)\(Z'*logKL)

% pois y = a0 * x1^a1 * x2^a2 ... xm^am
% pode ser calculado com log
% tal que log y = log a0 + a1 log x1 + a2 log x2 + ... + am log xm

% a =
%
%       0.57627
%         1.562
%       0.50742

% Compute fit statistics
Sr = sum((logKL-Z*a).^2)
r2 = 1-Sr/sum((logKL-mean(logKL)).^2)
syx = sqrt(Sr/(length(logKL)-length(a)))

% Sr =
%
%      0.024171
%
%
% r2 =
%
%       0.99619
%
%
% syx =
%
%      0.063471

% Generate plots
clf
KLpred = 10^a(1)*U.^a(2).*H.^a(3);
KLmin = min(KL);
KLmax = max(KL);
dKL = (KLmax-KLmin)/100;
KLmod = [KLmin:dKL:KLmax];
subplot(1,2,1)
loglog(KLpred,KL,'ko',KLmod,KLmod,'k-')
axis square,
title('(a) log-log plot')
legend('model prediction','1:1line','Location','NorthWest')
xlabel('log(K_L) measured'),ylabel('log(K_L) predicted')
subplot(1,2,2)
plot(KLpred,KL,'ko',KLmod,KLmod,'k-')
axis square,title('(b) untransformed plot')
legend('model prediction','1:1line','Location','NorthWest')
xlabel('K_L measured'),ylabel('K_L predicted')
```

```
a =

      0.57627
```

```
        1.562
      0.50742

Sr =

     0.024171

r2 =

      0.99619

syx =

     0.063471
```



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