Coercion between model objects and restriction matrices in the **pbkrtest** package

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Consider regression models for the 'cars' dataset:

```r
R> mod0 <- lm(dist ~ 1, data=cars); coef(mod0)
   (Intercept)       
  42.98
R> mod1 <- update(mod0, .~. + speed); coef(mod1)
   (Intercept) speed       
      -17.579095 3.932409
R> mod2 <- update(mod1, .~. + I(speed^2)); coef(mod2)
   (Intercept) speed I(speed^2)     
       2.4701378 0.9132876 0.0999593
```

Reducing 'mod2' to 'mod0' corresponds to restricting the model space for 'mod2' and so on:

```r
R> L21 <- model2remat(mod2, mod1); L21
      [,1] [,2] [,3]      
 [1,]  0 -1.544314e-17  1
R> L20 <- model2remat(mod2, mod0); L20
      [,1] [,2] [,3]      
 [1,] 0.000000e+00 -0.03309061 -0.99945236
 [2,] 5.724587e-15 -0.99945236  0.03309061
R> L10 <- model2remat(mod1, mod0); L10
      [,1] [,2]      
 [1,]  0 -1
```

The other way around is that given a restriction matrix and a large model, we can construct the corresponding smaller model:

```r
R> new1 <- remat2model(mod2, L21); coef(new1)
.X1 .X2
 3.932409 17.579095
R> new0a <- remat2model(mod2, L20); coef(new0a)
```

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It should be checked that the original and new model matrices span the same space. For now we will simply check that the fitted values are practically identical:

```r
R> new0b <- remat2model(mod1, L10); coef(new0b)
.R
42.98
R> eps <- 1e-8
R> max(abs(fitted(new1) - fitted(mod1))) < eps
[1] TRUE
R> max(abs(fitted(new0a) - fitted(mod0))) < eps
[1] TRUE
R> max(abs(fitted(new0b) - fitted(mod0))) < eps
[1] TRUE
```