c)

After 1 model 1 iteration:

Sentence pair (1) source length 3 target length 3 alignment score : 0.008
cainele musca cainele
NULL ({ 1 2 3 }) dog ({ }) bites ({ }) dog ({ })
Sentence pair (2) source length 2 target length 2 alignment score : 0.04
cainele latra
NULL ({ 1 2 }) dog ({ }) barked ({ })

After 2 model 1 iterations:

Sentence pair (1) source length 3 target length 3 alignment score : 0.148148
cainele musca cainele
NULL ({ }) dog ({ }) bites ({ 1 2 3 }) dog ({ })
Sentence pair (2) source length 2 target length 2 alignment score : 0.307692
cainele latra
NULL ({ }) dog ({ 1 }) barked ({ 2 })

After 5 model 1 iterations:

Sentence pair (1) source length 3 target length 3 alignment score : 0.305823
cainele musca cainele
NULL ({ 1 3 }) dog ({ }) bites ({ 2 }) dog ({ })
Sentence pair (2) source length 2 target length 2 alignment score : 0.651973
cainele latra
NULL ({ 1 }) dog ({ }) barked ({ 2 })

After 25 model 1 iterations:

Sentence pair (1) source length 3 target length 3 alignment score : 0.986313
cainele musca cainele
NULL ({ 1 3 }) dog ({ }) bites ({ 2 }) dog ({ })
Sentence pair (2) source length 2 target length 2 alignment score : 0.997707
cainele latra
NULL ({ 1 }) dog ({ }) barked ({ 2 })

After 100 model 1 iterations:

Sentence pair (1) source length 3 target length 3 alignment score : 1
cainele musca cainele
NULL ({ 1 3 }) dog ({ }) bites ({ 2 }) dog ({ })
Sentence pair (2) source length 2 target length 2 alignment score : 1
cainele latra
NULL ({ 1 }) dog ({ }) barked ({ 2 })

d)

After 5 model 1 iterations we can observe that the alignment values do not change, so after 100 iterations, the alignment values are still the same, only the score changes. After 5 model 1 iterations and after 5 model 3 iterations, the alignment table has other values and the alignment is more one-to-one, more exact.

e)

The resulting alignments A3:

Sentence pair (1) source length 8 target length 9 alignment score : 8.19117e-07
michael assumes that he will stay in the house NULL ({ 7 8 }) michael ({ 1 }) a ({ 2 }) dedus ({ 4 }) ca ({ 3 }) va ({ 5 }) ramane ({ 6 }) in ({ 9 }) casa ({ })
Sentence pair (2) source length 9 target length 9 alignment score : 3.77399e-05
michael assumes that michael will stay in the house NULL ({ 7 8 }) michael ({ 1 }) a ({ 2 }) dedus ({ }) ca ({ 3 }) michael ({ 4 }) va ({ 5 }) ramane ({ 6 }) in ({ 9 }) casa ({ })
Sentence pair (3) source length 10 target length 12 alignment score : 2.28585e-08
he assumes in the house that michael will stay in the house NULL ({ 3 4 10 11 }) a ({ 2 }) dedus ({ 1 }) in ({ 5 }) casa ({ }) ca ({ 6 }) michael ({ 7 }) va ({ 8 }) ramane ({ 9 }) in ({ 12 }) casa ({ })

Sentence pair (1) source length 9 target length 8 alignment score : 4.07123e-05 michael a dedus ca va ramane in casa NULL ({ 7 }) michael ({ 1 }) assumes ({ 2 }) that ({ 4 }) he ({ 3 }) will ({ 5 }) stay ({ 6 }) in ({ 8 }) the ({ }) house ({ })
Sentence pair (2) source length 9 target length 9 alignment score : 6.13449e-05 michael a dedus ca michael va ramane in casa NULL ({ 3 8 }) michael ({ 1 }) assumes ({ 2 }) that ({ 4 }) michael ({ 5 }) will ({ 6 }) stay ({ 7 }) in ({ 9 }) the ({ }) house ({ })
Sentence pair (3) source length 12 target length 10 alignment score : 2.15302e-06 a dedus in casa ca michael va ramane in casa NULL ({ 3 9 }) he ({ 2 }) assumes ({ 1 }) in ({ 4 }) the ({ }) house ({ }) that ({ 5 }) michael ({ 6 }) will ({ 7 }) stay ({ 8 }) in ({ 10 }) the ({ }) house ({ })

1.

	NULL	michael	a	dedus	ca	va	ramane	in	casa
michael		X							
assumes			X						
that					X				
he				X					
will						X			
stay							X		
in	X								
the	X								
house								X	

2.

	NULL	michael	a	dedus	ca	michael	va	ramane	in	casa
michael		X								
assumes			X							
that					X					
michael						X				
will							X			
stay								X		
in	X									
the	X									
house									X	

3.

	NULL	a	dedus	in	casa	ca	michael	va	ramane	in	casa
he			X								
assumes		X									
in	X										
the	X										
house				X							
that						X					
michael							X				
will								X			
stay									X		
in	X										
the	X										
house										X	

4.

	NULL	michael	assumes	that	he	will	stay	in	the	house
michael		X								
a			X							
dedus					X					
ca				X						
va						X				
ramane							X			
in	X									
casa								X		

5.

	NULL	michael	assumes	that	michael	will	stay	in	the	house
michael		X								
a			X							
dedus	X									
ca				X						
michael					X					
va						X				
ramane							X			
in	X									
casa								X		

6.

	NULL	he	assumes	in	the	house	that	michael	will	stay	in	the	house
a			X										
dedus		X											
in	X												
casa				X									
ca							X						
michael								X					
va									X				
ramane										X			
in	X												
casa											X		