

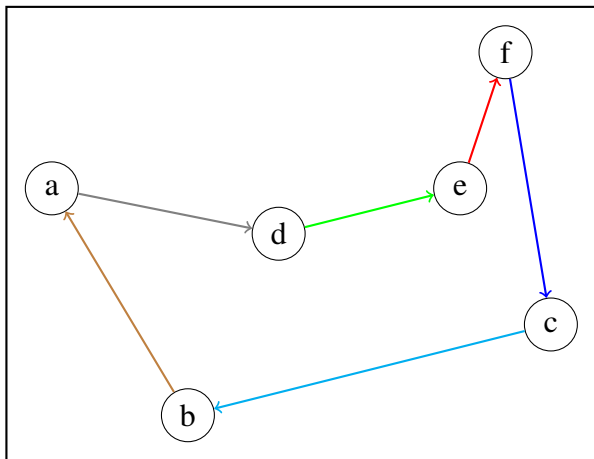
1. Übung

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1 Aufgabe

1.1 a)



Farbe	Knoten	Dist	hinzu	f(x')
gray	d	51	(a,d)	51
green	e	41	(d,e)	92
red	f	32	(e,f)	124
blue	c	61	(f,c)	185
cyan	b	82	(c,b)	267
brown	a	58	(b,a)	325

1.2 b)

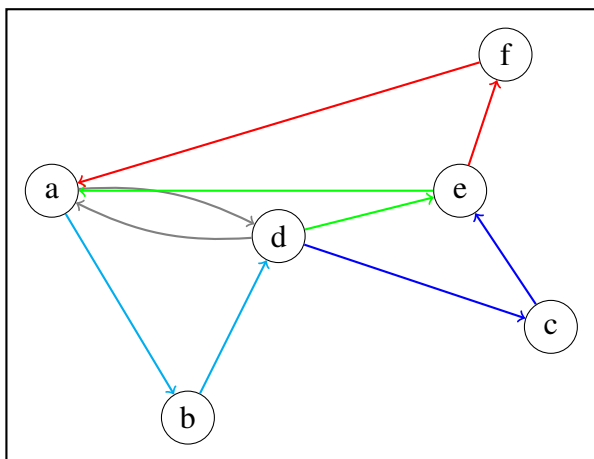


Figure 1: Iterationsweise

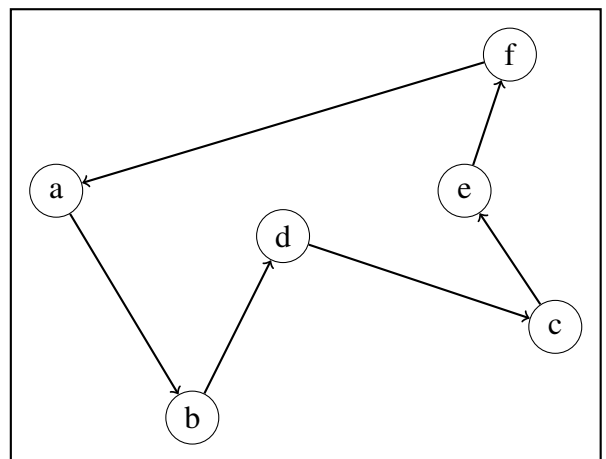


Figure 2: Final

Farbe	Knoten	über	Dist	vorher	nachher	löschen	hinzu	f(x')
gray	d	a	51	-	-	-	(a,d),(d,a)	102
green	e	d	41	102-51+90+41=182	102-51+41+90=182	(d,a)	(d,e),(e,a)	182
red	f	e	32	182-41+64+32=237	182-90+32+104=228	(e,a)	(e,f),(f,a)	228
blue	c	e	36	228-41+63+36=286	228-32+36+61=293	(d,e)	(d,c),(c,e)	286
cyan	b	d	45	286-51+58+45=338	286-63+45+82=350	(a,d)	(a,b),(b,d)	338

1.3 c)

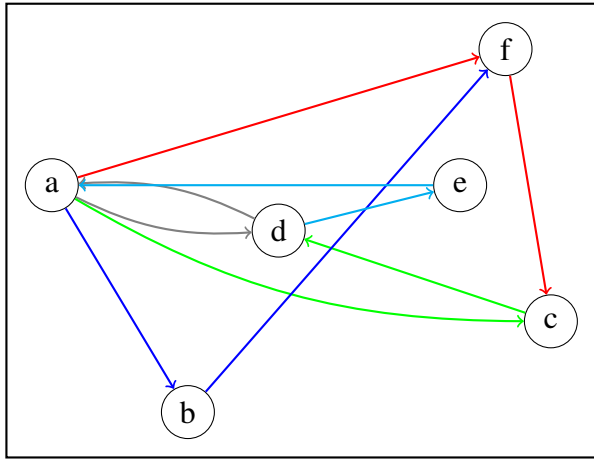


Figure 3: Iterationsweise

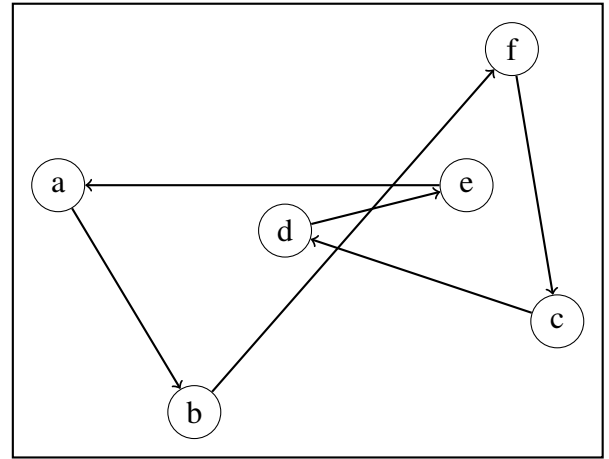


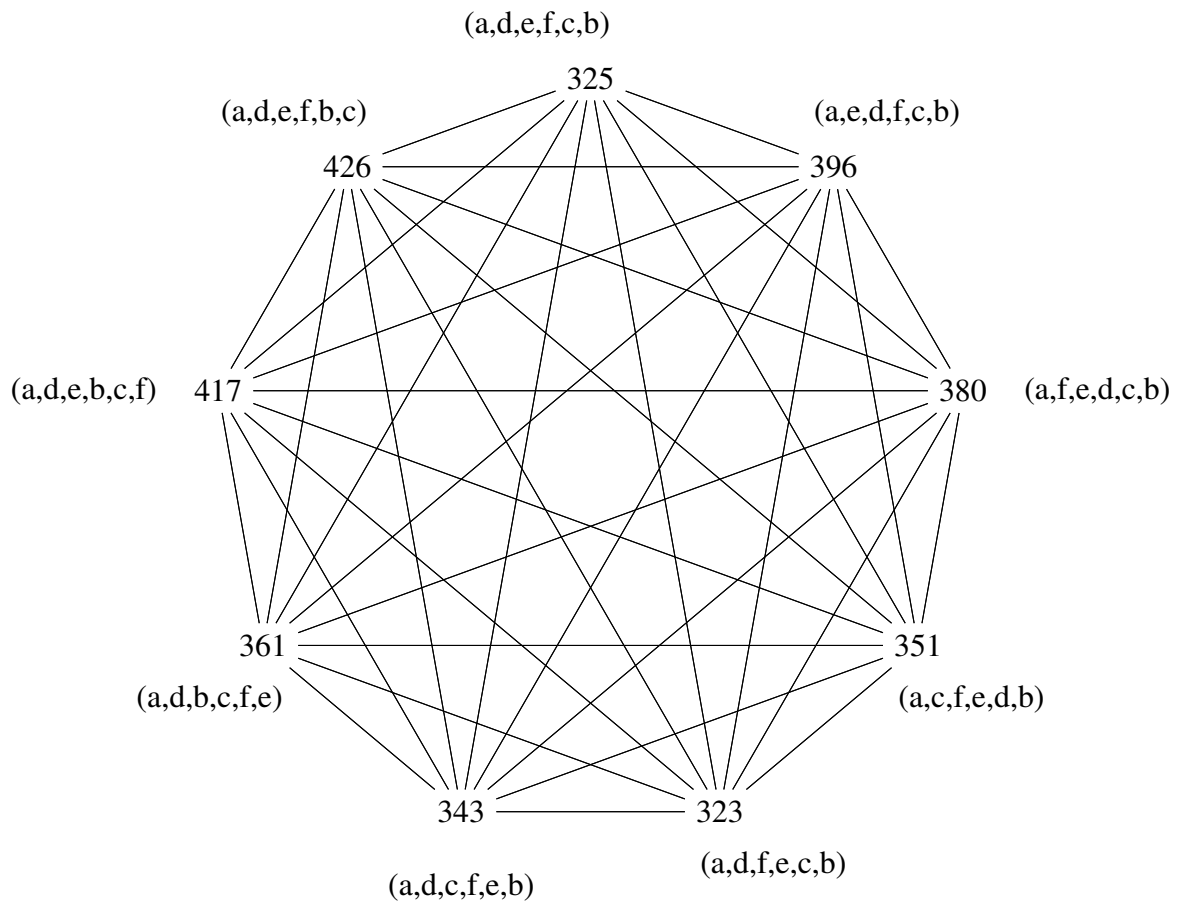
Figure 4: Final

Farbe	Knoten	über	Dist	vorher	nachher	löschen	hinzu	f(x')
gray	d	a	51	-	-	-	(a,d),(d,a)	102
green	c	a	114	102-51+63+114=228	102-51+114+63=228	(a,d)	(a,c),(c,d)	228
red	f	a	104	228-51+64+104=345	228-114+104+61=279	(a,c)	(a,f),(f,c)	279
blue	b	f	106	279-104+58+106=339	279-61+106+82=406	(a,f)	(a,b),(b,f)	339
cyan	e	a	90	339-51+41+90=419	339-58+90+78=449	(d,a)	(d,e),(e,a)	351

1.4 d)

- *Nearest-Neighbor*: $\frac{325}{323} = 1.0062$
- *Nearest-Insertion*: $\frac{338}{323} = 1.0464$
- *Farthest-Insertion*: $\frac{351}{323} = 1.0867$

2 Aufgabe



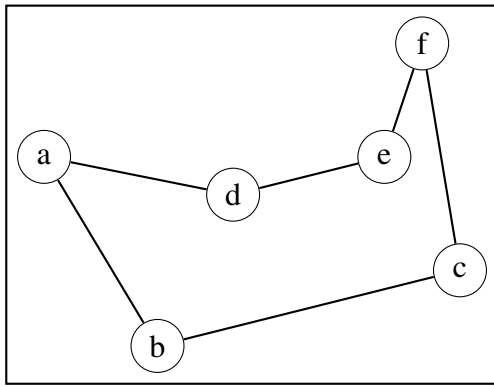


Figure 5: (a,d,e,f,c,b)

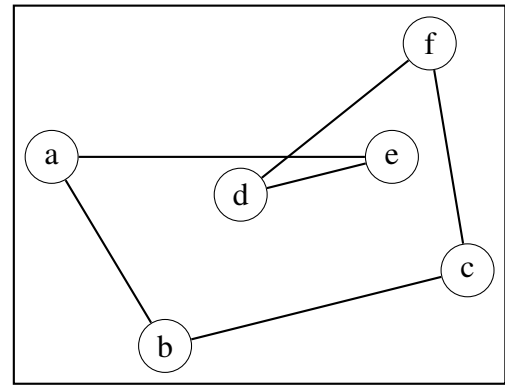


Figure 9: (a,e,d,f,c,b)

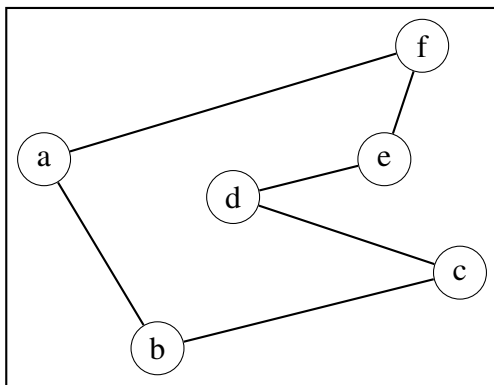


Figure 6: (a,f,e,d,c,b)

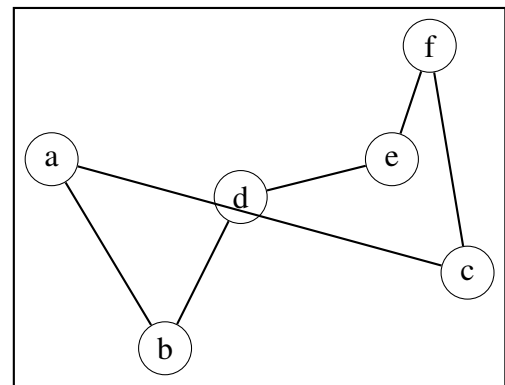


Figure 10: (a,c,f,e,d,b)

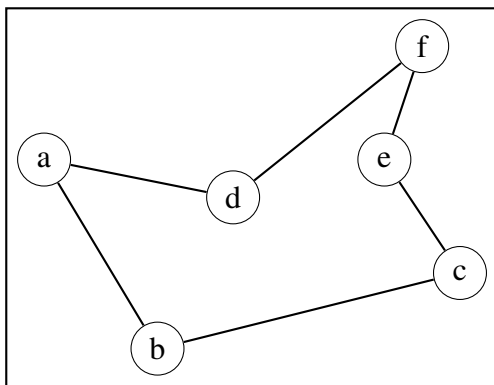


Figure 7: (a,d,f,e,c,b)

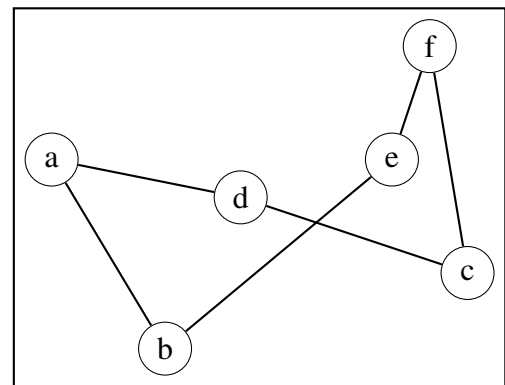


Figure 11: (a,d,c,f,e,b)

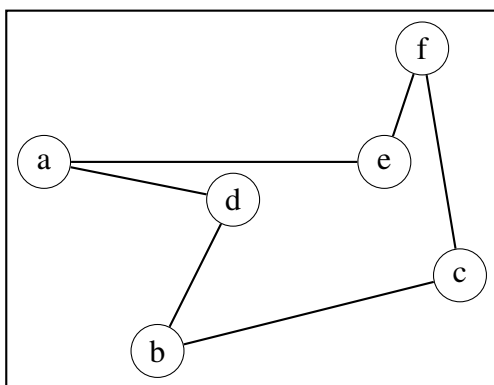


Figure 8: (a,d,b,c,f,e)

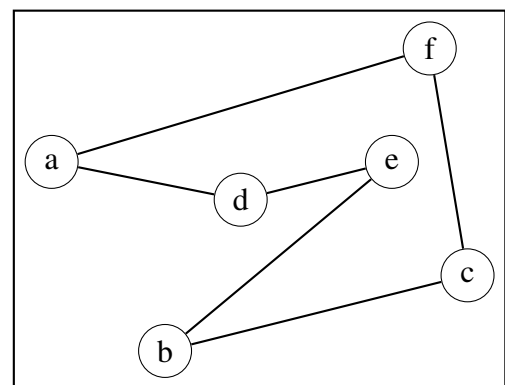


Figure 12: (a,d,e,b,c,f)

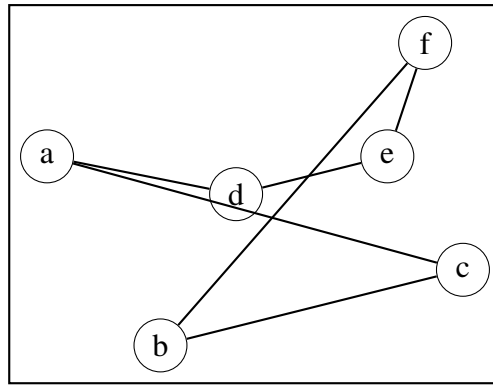


Figure 13: (a,d,e,b,c)