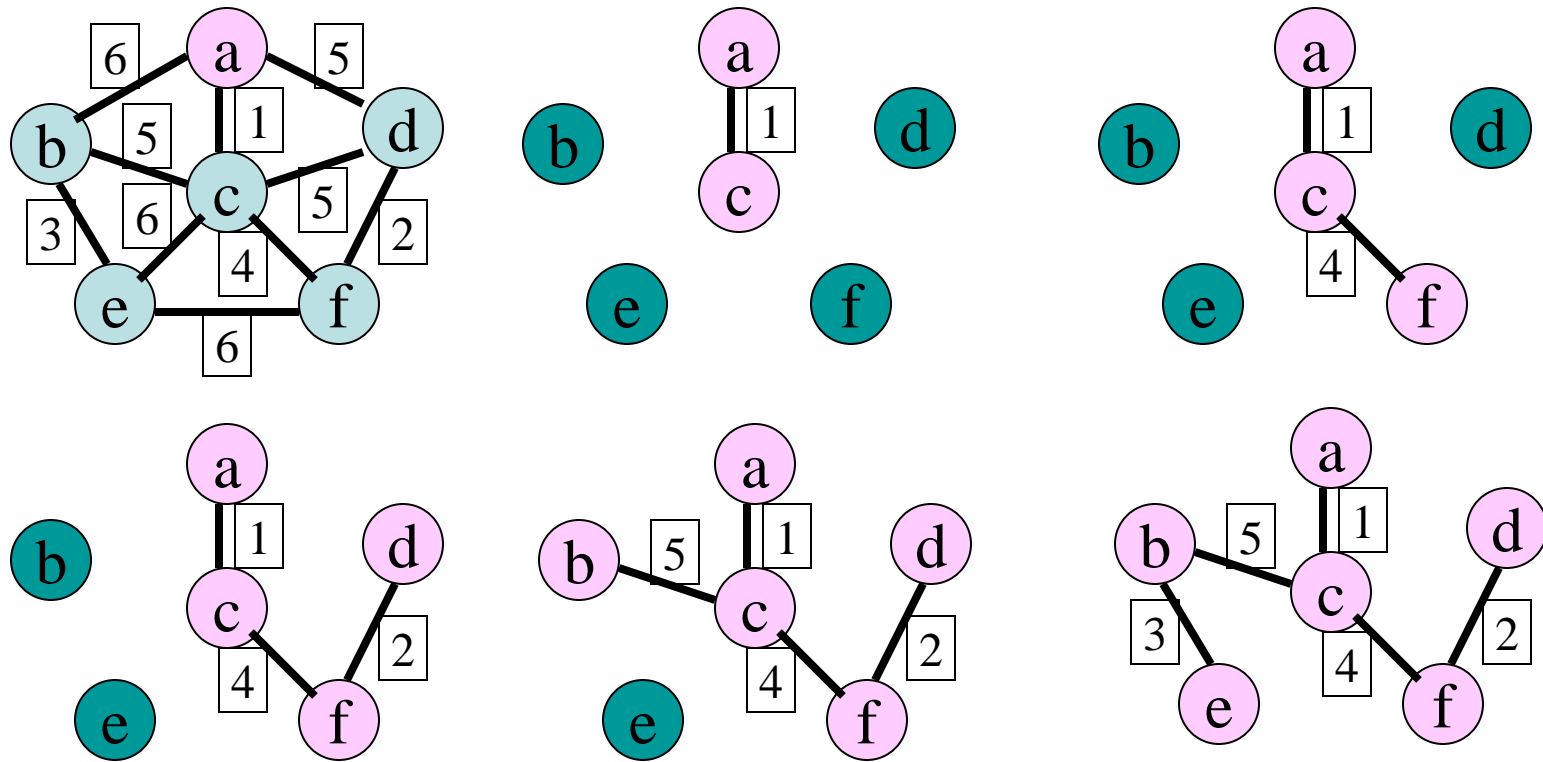
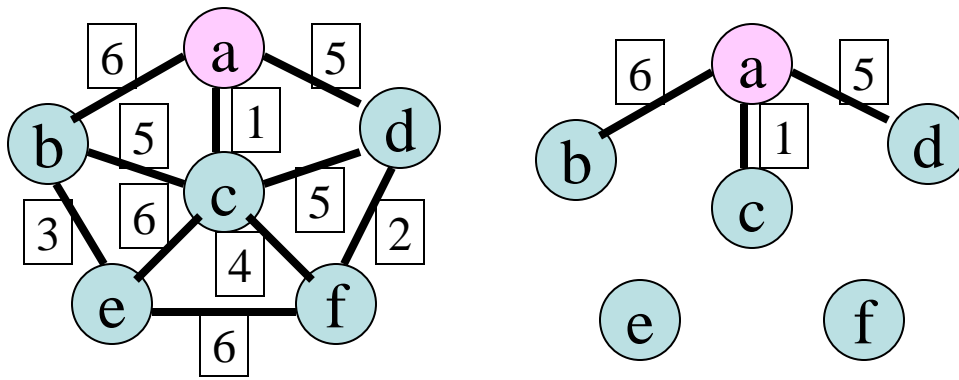


Prim's Example - overview



Prim's Example - initialisation



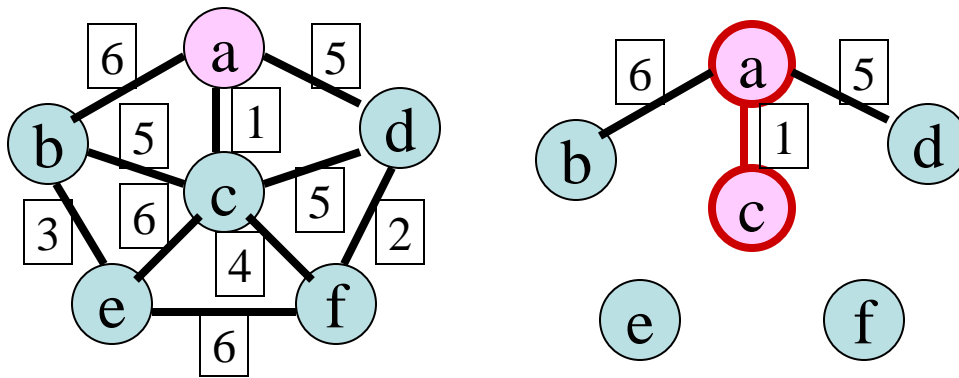
$V = \{a, b, c, d, e, f\}$

$U = \{a\}$

$V-U = \{b, c, d, e, f\}$

	a	b	c	d	e	f
low-cost		6	1	5		
closest		a	a	a	a	a

Prim's Example – choose minimum



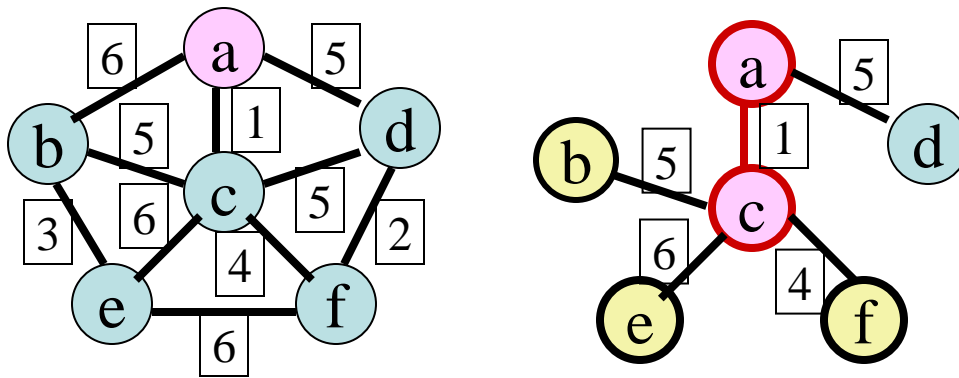
$V = \{a, b, c, d, e, f\}$

$U = \{a\}$

$V-U = \{b, c, d, e, f\}$

	a	b	c	d	e	f
low-cost		6	1	5		
closest		a	a	a	a	a

Prim's Example – readjust costs



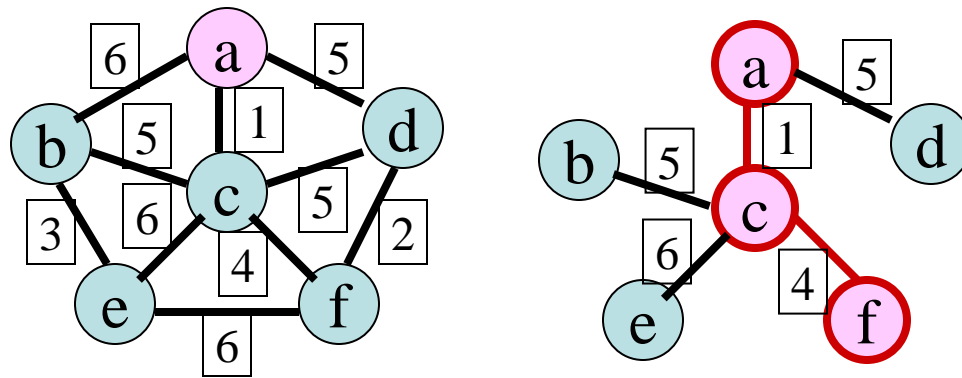
$V = \{a, b, c, d, e, f\}$

$U = \{a, c\}$

$V-U = \{b, d, e, f\}$

	a	b	c	d	e	f
low-cost		5	1	5	6	4
closest		c	a	a	c	c

Prim's Example – choose minimum



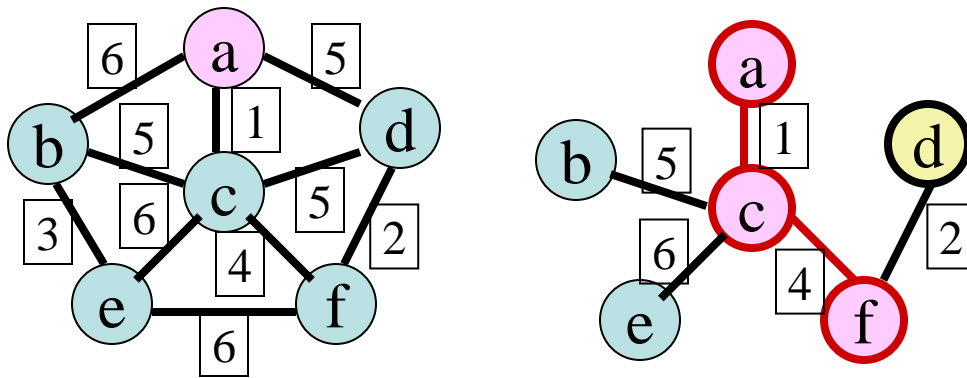
$V = \{a, b, c, d, e, f\}$

$U = \{a, c\}$

$V-U = \{b, d, e, f\}$

	a	b	c	d	e	f
low-cost		5	1	5	6	4
closest		c	a	a	c	c

Prim's Example – readjust costs



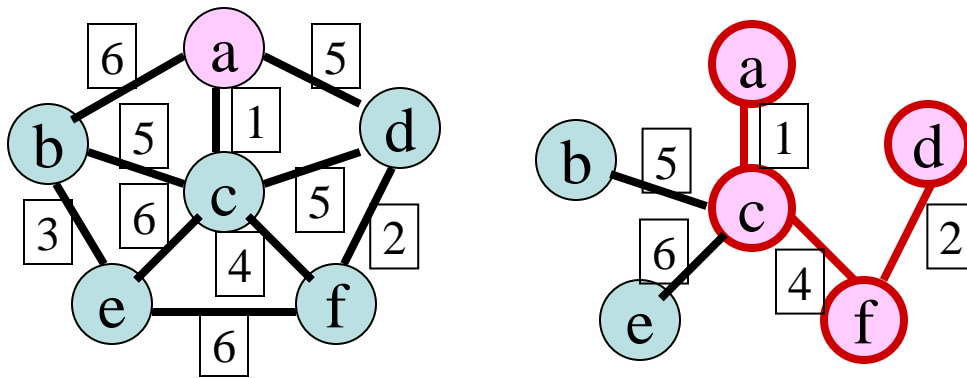
$V = \{a, b, c, d, e, f\}$

$U = \{a, c, f\}$

$V-U = \{b, d, e\}$

	a	b	c	d	e	f
low-cost		5	1	2	6	4
closest		c	a	f	c	c

Prim's Example – choose minimum



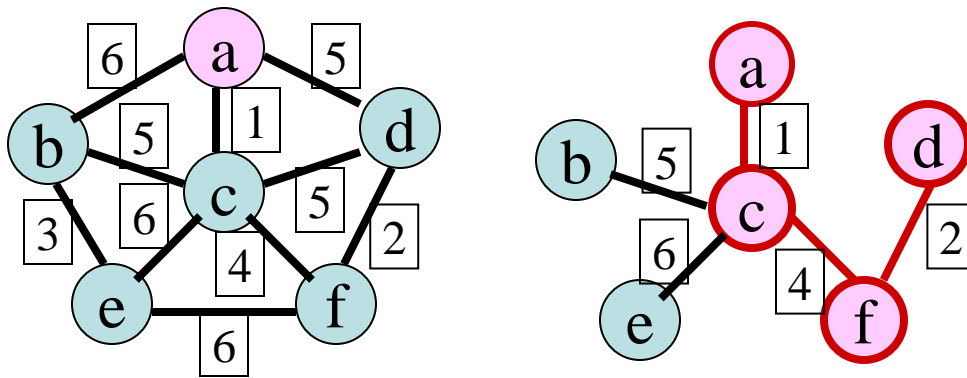
$V = \{a, b, c, d, e, f\}$

$U = \{a, c, f\}$

$V-U = \{b, d, e\}$

	a	b	c	d	e	f
low-cost		5	1	2	6	4
closest		c	a	f	c	c

Prim's Example – readjust costs



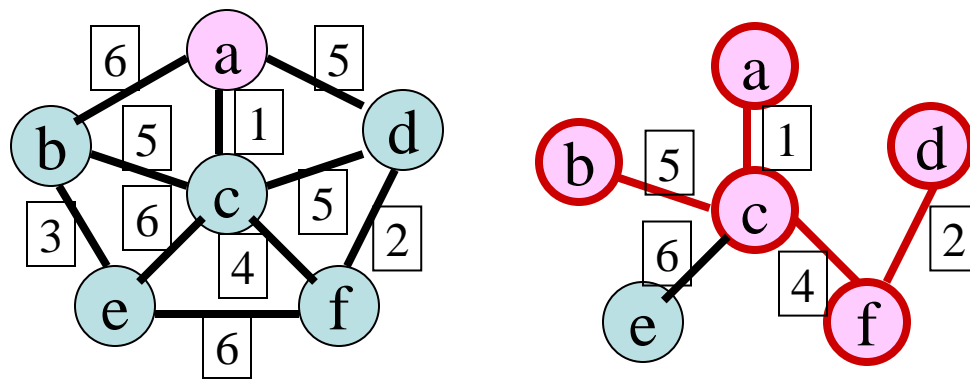
$V = \{a, b, c, d, e, f\}$

$U = \{a, c, f, d\}$

$V-U = \{b, e\}$

	a	b	c	d	e	f
low-cost		5	1	2	6	4
closest		c	a	f	c	c

Prim's Example – choose minimum



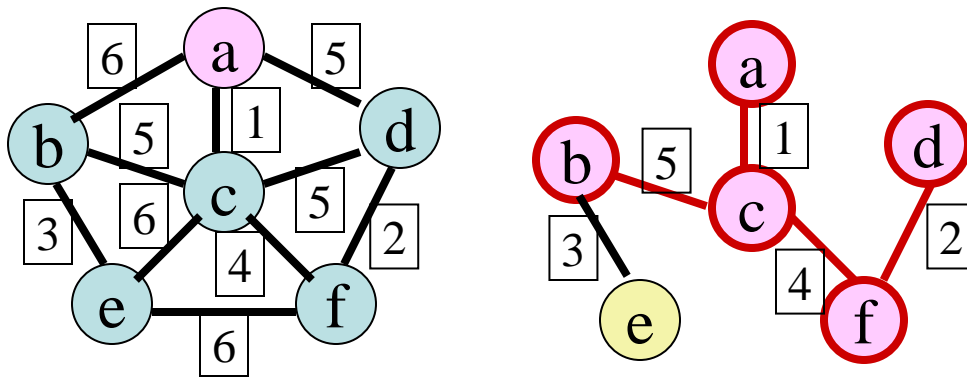
$V = \{a, b, c, d, e, f\}$

$U = \{a, c, f, d\}$

$V-U = \{b, e\}$

	a	b	c	d	e	f
low-cost		5	1	2	6	4
closest		c	a	f	c	c

Prim's Example – readjust costs



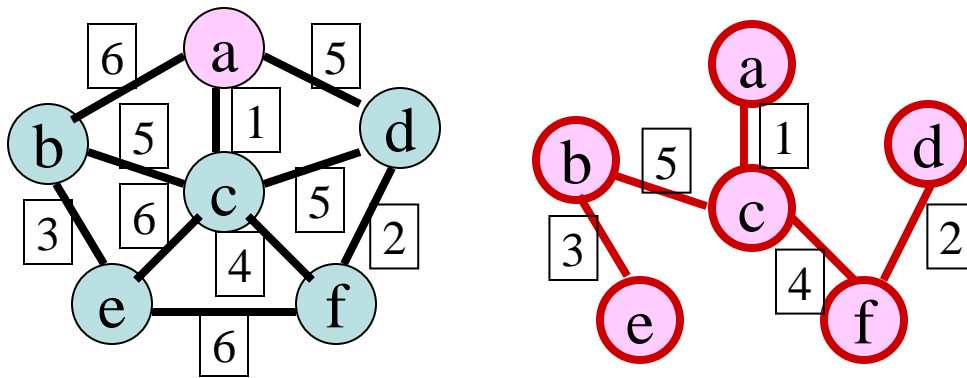
$V = \{a, b, c, d, e, f\}$

$U = \{a, c, f, d, b\}$

$V-U = \{e\}$

	a	b	c	d	e	f
low-cost		5	1	2	3	4
closest		c	a	f	b	c

Prim's Example – choose minimum



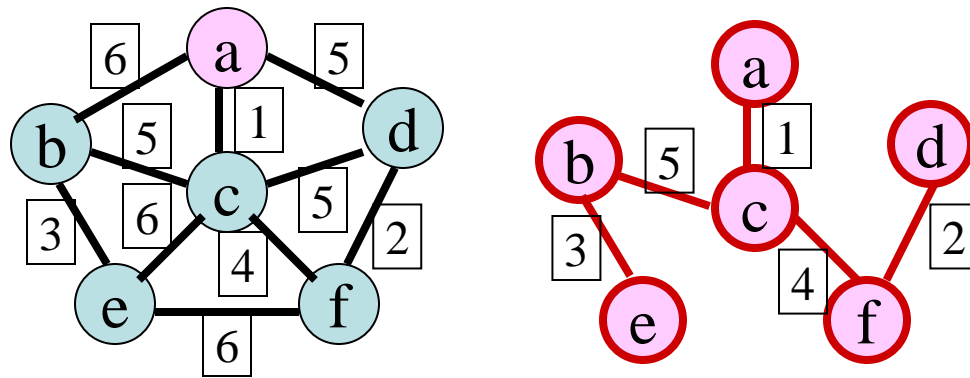
$V = \{a, b, c, d, e, f\}$

$U = \{a, c, f, d, b\}$

$V-U = \{e\}$

	a	b	c	d	e	f
low-cost		5	1	2	3	4
closest		c	a	f	b	c

Prim's Example – readjust costs



$V = \{a, b, c, d, e, f\}$

$U = \{a, c, f, d, b, e\}$

$V-U = \{\}$

	a	b	c	d	e	f
low-cost		5	1	2	3	4
closest		c	a	f	b	c

MST finished

Cost = 15