

「グラフと組み合わせ」課題2 (解答例)

2019/4/18

1 グラフの記述

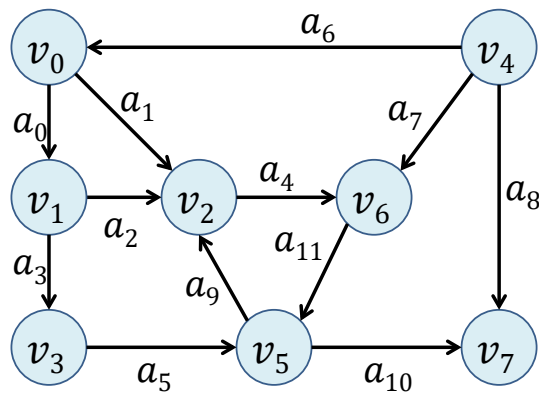
以下で記述されたグラフを幾何学的表現として表しなさい。

$$V = \{v_0, v_1, v_2, v_3, v_4, v_5, v_6, v_7\}$$

$$A = \{a_0, a_1, a_2, a_3, a_4, a_5, a_6, a_7, a_8, a_9, a_{10}, a_{11}\}$$

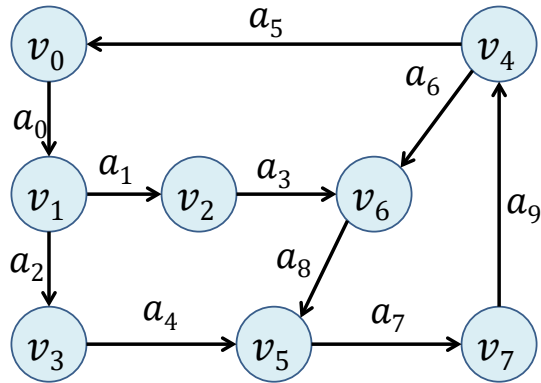
$\partial^+ a_0 = v_0$	$\partial^- a_0 = v_1$	$\partial^+ a_1 = v_0$	$\partial^- a_1 = v_2$
$\partial^+ a_2 = v_1$	$\partial^- a_2 = v_2$	$\partial^+ a_3 = v_1$	$\partial^- a_3 = v_3$
$\partial^+ a_4 = v_2$	$\partial^- a_4 = v_6$	$\partial^+ a_5 = v_3$	$\partial^- a_5 = v_5$
$\partial^+ a_6 = v_4$	$\partial^- a_6 = v_0$	$\partial^+ a_7 = v_4$	$\partial^- a_7 = v_6$
$\partial^+ a_8 = v_4$	$\partial^- a_8 = v_7$	$\partial^+ a_9 = v_5$	$\partial^- a_9 = v_2$
$\partial^+ a_{10} = v_5$	$\partial^- a_{10} = v_7$	$\partial^+ a_{11} = v_6$	$\partial^- a_{11} = v_5$

解答例



2 グラフの記述 (幾何学的表現から記号表現へ)

次のグラフを記号で表現しなさい。



解答例

$$V = \{v_0, v_1, v_2, v_3, v_4, v_5, v_6, v_7\}$$

$$A = \{a_0, a_1, a_2, a_3, a_4, a_5, a_6, a_7, a_8, a_9\}$$

$$\partial^+ a_0 = v_1$$

$$\partial^- a_0 = v_0$$

$$\partial^+ a_1 = v_2$$

$$\partial^- a_1 = v_1$$

$$\partial^+ a_2 = v_3$$

$$\partial^- a_2 = v_1$$

$$\partial^+ a_3 = v_6$$

$$\partial^- a_3 = v_2$$

$$\partial^+ a_4 = v_5$$

$$\partial^- a_4 = v_3$$

$$\partial^+ a_5 = v_4$$

$$\partial^- a_5 = v_0$$

$$\partial^+ a_6 = v_6$$

$$\partial^- a_6 = v_4$$

$$\partial^+ a_7 = v_7$$

$$\partial^- a_7 = v_5$$

$$\partial^+ a_8 = v_5$$

$$\partial^- a_8 = v_6$$

$$\partial^+ a_9 = v_4$$

$$\partial^- a_9 = v_7$$