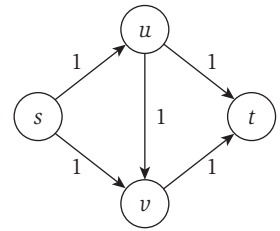
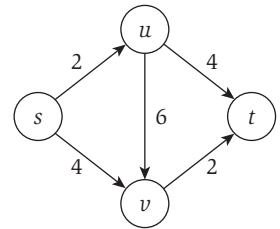


## Exercises

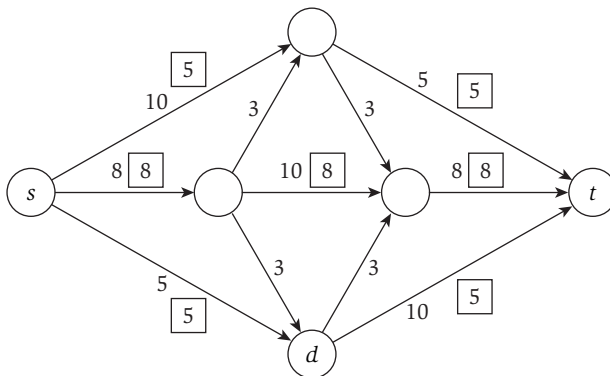
1. (a) List all the minimum  $s$ - $t$  cuts in the flow network pictured in Figure 7.24. The capacity of each edge appears as a label next to the edge.  
 (b) What is the minimum capacity of an  $s$ - $t$  cut in the flow network in Figure 7.25? Again, the capacity of each edge appears as a label next to the edge.
2. Figure 7.26 shows a flow network on which an  $s$ - $t$  flow has been computed. The capacity of each edge appears as a label next to the edge, and the numbers in boxes give the amount of flow sent on each edge. (Edges without boxed numbers—specifically, the four edges of capacity 3—have no flow being sent on them.)  
 (a) What is the value of this flow? Is this a maximum ( $s,t$ ) flow in this graph?  
 (b) Find a minimum  $s$ - $t$  cut in the flow network pictured in Figure 7.26, and also say what its capacity is.
3. Figure 7.27 shows a flow network on which an  $s$ - $t$  flow has been computed. The capacity of each edge appears as a label next to the edge, and the numbers in boxes give the amount of flow sent on each edge. (Edges without boxed numbers have no flow being sent on them.)  
 (a) What is the value of this flow? Is this a maximum ( $s,t$ ) flow in this graph?



**Figure 7.24** What are the minimum  $s$ - $t$  cuts in this flow network?



**Figure 7.25** What is the minimum capacity of an  $s$ - $t$  cut in this flow network?



**Figure 7.26** What is the value of the depicted flow? Is it a maximum flow? What is the minimum cut?