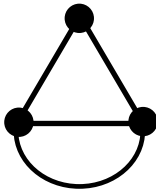


## The Konigsberg Problem - are these traversable?

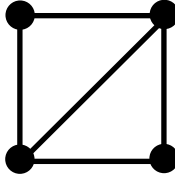
For each of the following networks, decide whether they are traversable or not:

1)



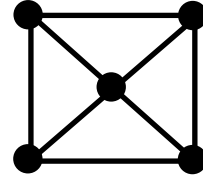
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

2)



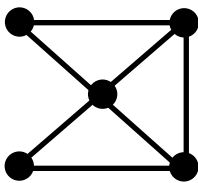
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

3)



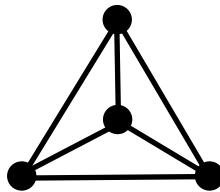
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

4)



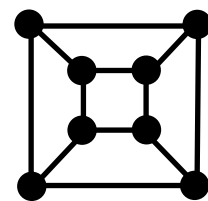
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

5)



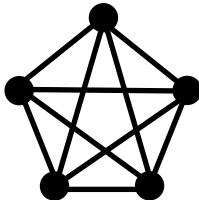
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

6)



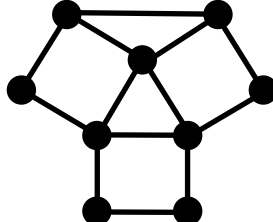
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

7)



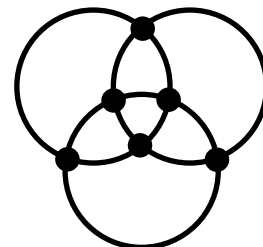
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

8)



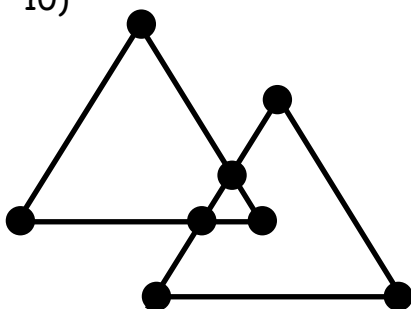
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

9)



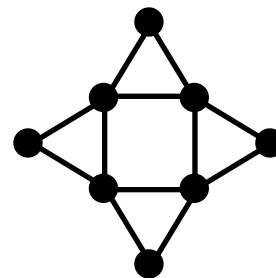
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

10)

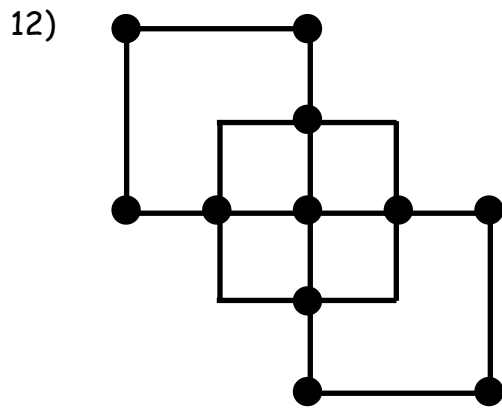


Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

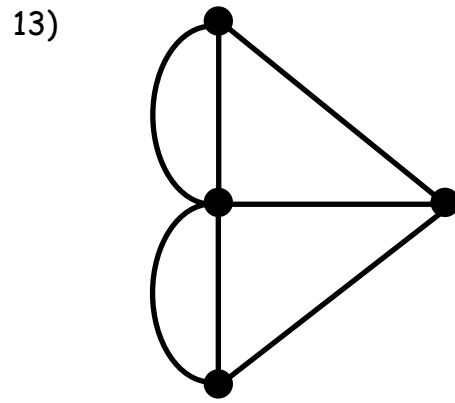
11)



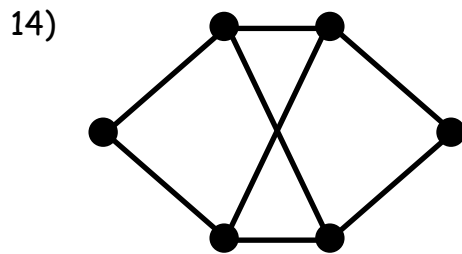
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>



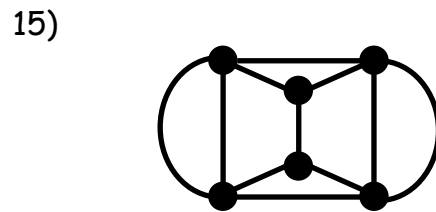
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>



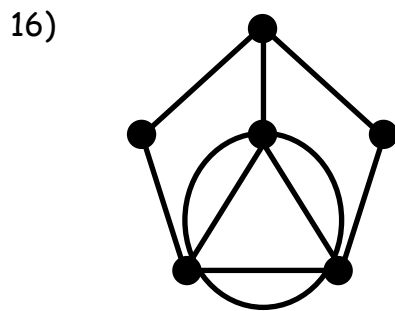
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>



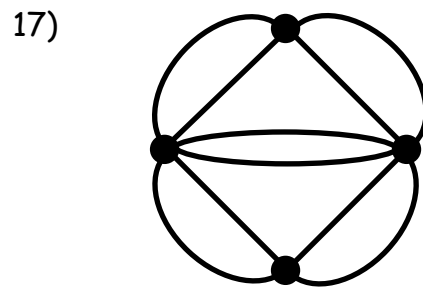
Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>



Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>



Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>



Traversable	<input type="checkbox"/>
Non-Traversable	<input type="checkbox"/>

Now you need to start looking for patterns. Some of these networks are traversable, and some are not - can you spot why?

→ You might find a good starting point is to create some networks of your own and see what happens as you build them up!

### The Konigsberg Problem - table

Fill in the gaps in the table - each vertex is either even or odd. It is odd if it has an odd number of arcs joining it. It is even if it has an even number of arcs joining it. Can you find a pattern and then explain why some networks are traversable and others are not?

<b>Network Number</b>	<b>Traversable?</b>	<b>Even vertices</b>	<b>Odd vertices</b>
<b>1</b>			
<b>2</b>			
<b>3</b>			
<b>4</b>			
<b>5</b>			
<b>6</b>			
<b>7</b>			
<b>8</b>			
<b>9</b>			
<b>10</b>			
<b>11</b>			
<b>12</b>			
<b>13</b>			
<b>14</b>			
<b>15</b>			
<b>16</b>			
<b>17</b>			