

```

1  public class Block {
2      Block north;
3      Block south;
4      Layer layer;
5      int width;
6      public Block(int width) {
7          this.width = width;
8          if (width > 2) {
9              north = new Block(width / 2);
10             south = new Block(width / 2);
11         }
12         layer = new Layer(width);
13     }
14     public int traverse(int input) {
15         int wire = layer.traverse(input);
16         if (width > 2) {
17             if (wire < width / 2) {
18                 return north.traverse(wire);
19             } else {
20                 return (width / 2) + south.traverse(wire - (width / 2));
21             }
22         } else {
23             return wire;
24         }
25     }
26 }

```

FIGURE 12.21 The Block network.