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| **Skill 27.3 Exercise 1** | | |
| Complete the stack diagram for the code block shown, then indicate the output. | | |
| class Main {  public static void main(String[] args) {  Recursion.reduceByOne(4);  }  }  class Recursion{  public static void reduceByOne(int n){  if(n > 0)  System.out.println(n);  reduceByOne(n-1);  System.out.println(n);  }  }  } | **Stack** | **Output** |
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| **Skill 27.4 Exercise 1** | |
| Complete the stack diagram for the code block below. | |
| Consider the following method.  public static int calcMethod(int num)  {  if (num == 0)  {  return 10;  }  return num + calcMethod(num / 2);  }  Complete the stack diagram for the following call, then indicate what is returned.  calcMethod(16) | |
| **Stack** | **Output** |
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| **Skill 27.4 Exercise 2** | |
| Complete the stack diagram for the code block below. | |
| Consider the following method.  public String goAgain(String str, int index)  {    if (index >= str.length())      return str;      return str + goAgain(str.substring(index), index + 1);  }    Complete the stack diagram for the following call, then indicate what is printed.  System.out.println(goAgain("today", 1)); | |
| **Stack** | **Output** |
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| **Skill 27.4 Exercise 3** |
| Complete the stack diagram for the code block shown, then indicate the output. |
| class Main {  public static void main(String[] args) {  System.out.println(Recursion.pls(4));  }  }  class Recursion{  public static int pls(int n)  {  if (n == 0)  return 5;  else if (n == 1)  return 11;  else  return pls(n - 1) + 2 \* pls(n - 2);  }  } |
| **Stack** |
|  |
| **Output** |
|  |

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| --- | --- | --- |
| **Skill 27.4 Exercise 4** | | |
| Complete the stack diagram for the code block shown, then indicate the output. | | |
| class Main {  public static void main(String[] args) {    Recursion.homer(9));  }  }  class Recursion{  public static void homer(int n)  {  if (n <= 1)  System.out.print(n);  else  homer(n / 2);  System.out.print(“,” + n);  } | **Stack** | **Output** |
|  |  |