Read over the definition below. I’ve omitted any check-expect expressions because I want you to predict what you expect:

```
(define (g d)
  (cond
    [(> d 0)
      (overlay
        (beside (g (- d 1)) (g (- d 1)))
        (square (* 2 (image-width (g (- d 1)))) "outline" "green")))
    [else (square 10 "outline" "green")]))
```

Without running the code in DrRacket, predict what \((g \ 0)\) produces. To do this, read over the code, replacing each occurrence of the placeholder "d" by 0.

Still without the code in DrRacket, predict what \((g \ 1)\) produces. Again read over the code, replacing each occurrence of the placeholder "d" by 1. At this point you already know what \((g \ 0)\) produces.

Now predict what \((g \ 2)\) produces. As before, read over the code, replacing each occurrence of the placeholder "d" by 2. And, you already know what \((g \ 1)\) produces.
Now read over this code. Again, I have omitted any check-expect expressions.

(require picturing-programs)

; k : number -> image
(define (k d)
  (cond
   [(> d 0)
     (beside/align
      "bottom"
      (k (- d 1))
      (rotate 60 (k (- d 1)))
      (rotate -60 (k (- d 1)))
      (k (- d 1)))]
   [else (line 5 0 "blue")]))

Predict what \texttt{(k 0)} produces. You should replace all occurrences of the placeholder "d" in the definition by 0, and then carefully trace the code.

Predict what \texttt{(k 1)} produces. Replace all occurrences of the placeholder "d" in the definition by 1, and then trace the code. At this point you already know what \texttt{(k 0)} produces.

Predict what \texttt{(k 2)} produces. Replace all occurrences of the placeholder "d" in the definition by 2, then trace the code. At this point you already know what \texttt{(k 1)} produces.
Finally, read over this code, which has been shorn of all its check-expect expressions:

```
(require picturing-programs)

; s : number -> image
(define (s d)
  (cond
   [(> d 0) (beside/align "bottom"
              (line 0 (+ 5 (* 2 d)) "red")
              (rotate 90 (s (- d 1))))]
   [else (line 0 5 "red")]))
```

Predict what $(s \ 0)$ produces. To do this, replace all occurrences of the placeholder "d" by 0, and then trace the code.

Predict what $(s \ 1)$ produces. As usual, replace all occurrences of the placeholder "d" by 1, and then trace the code. You already know what $(s \ 0)$ produces.

Predict what $(s \ 2)$ produces. Replace all occurrences of the placeholder "d" by 2, and trace the code. You already know what $(s \ 1)$ produces.