

Tuesday, September 29

Name SOLUTIONS

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Miniquiz #12

5 Minutes

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1. Recall that a closure can be represented by the constructor  $Function(a_f, x_p, s)$ . In plain English, what do each of the parameters represent?

- $a_f$  : Address of the frame (scope) in which the closure was created.
- $x_p$  : Parameter to the function.
- $s$  : Statements in the body of the function.

2. For each function in the following IMP program, list all the variables that are visible when the function is invoked (but right before the first statement in the body is executed).

```
var a = 2;
var b = 3;
var f = fun(c) {
  var g = fun(d) {
    var h = 2;
    return h;
  };
  var e = 1;
  return g;
};
f(a)(a);
```

- $f$ : a, b, f, c
- $g$ : a, b, f, c, g, e, d