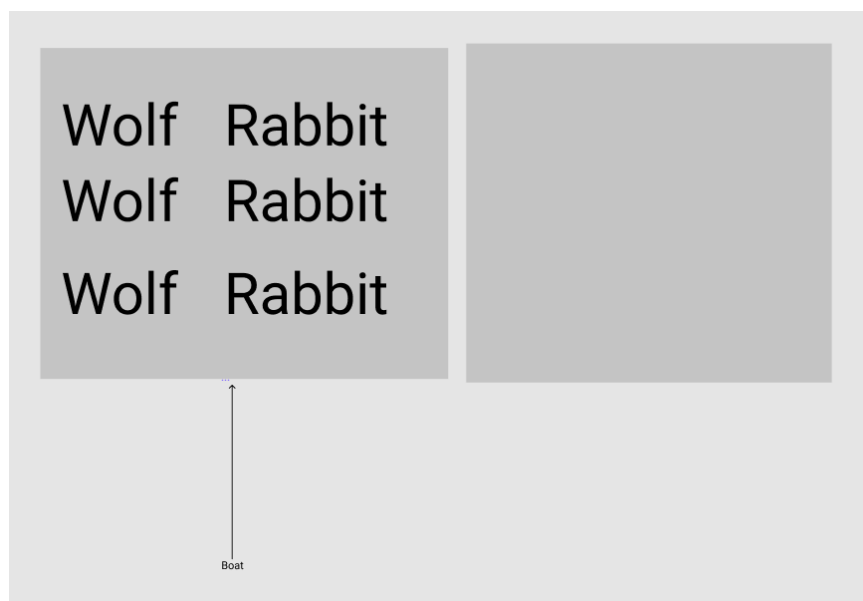


Week 3 Assignment 1 River Movements

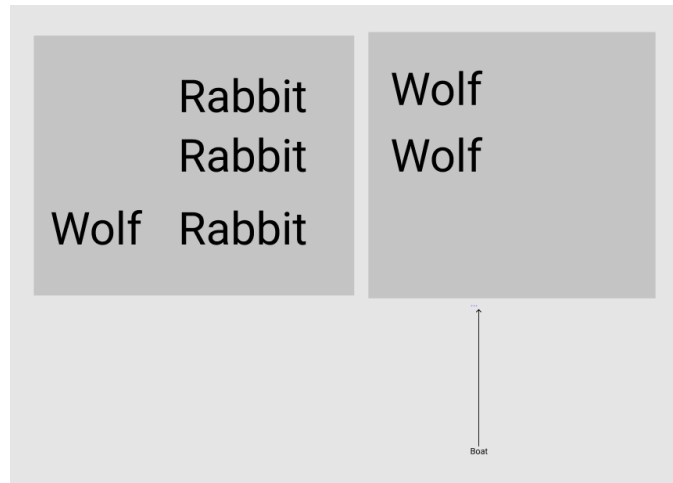
Z3 Solution

```
sat
(model
  (define-fun Shore2Wolfs ((x!0 Int)) Int
    (ite (= x!0 0) 0
      (ite (= x!0 11) 3
        (ite (= x!0 2) 1
          (ite (= x!0 3) 3
            (ite (= x!0 6) 1
              (ite (= x!0 7) 1
                (ite (= x!0 8) 0
                  2)))))))
  (define-fun Shore1Rabbits ((x!0 Int)) Int
    (ite (= x!0 11) 0
      (ite (= x!0 5) 1
        (ite (= x!0 6) 2
          (ite (= x!0 7) 0
            (ite (= x!0 8) 0
              (ite (= x!0 9) 0
                (ite (= x!0 10) 1
                  3)))))))
  (define-fun Shore1Wolves ((x!0 Int)) Int
    (ite (= x!0 0) 3
      (ite (= x!0 11) 0
        (ite (= x!0 2) 2
          (ite (= x!0 3) 0
            (ite (= x!0 6) 2
              (ite (= x!0 7) 2
                (ite (= x!0 8) 3
                  1)))))))
  (define-fun Shore2Rabbits ((x!0 Int)) Int
    (ite (= x!0 11) 3
      (ite (= x!0 5) 2
        (ite (= x!0 6) 1
          (ite (= x!0 7) 3
            (ite (= x!0 8) 3
              (ite (= x!0 9) 3
                (ite (= x!0 10) 2
                  0)))))))
)
```

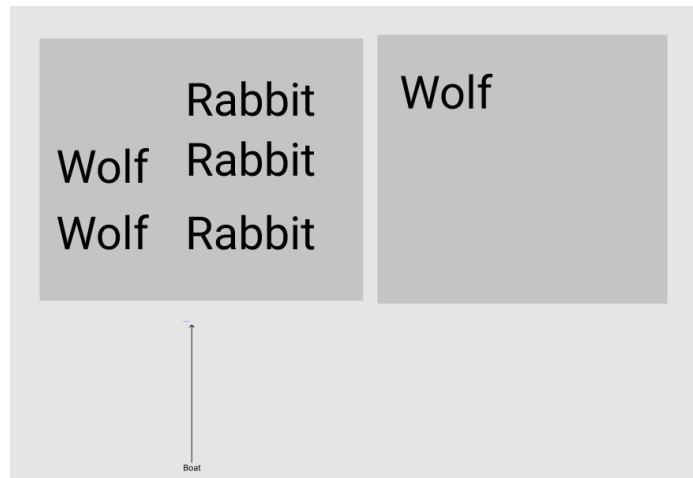
Start



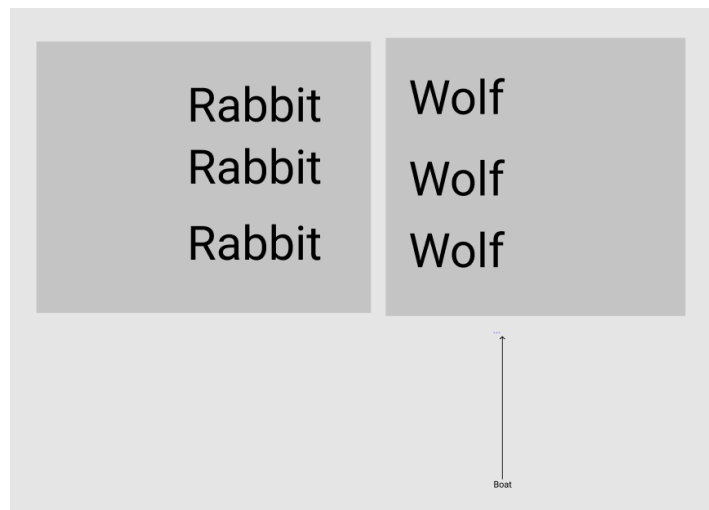
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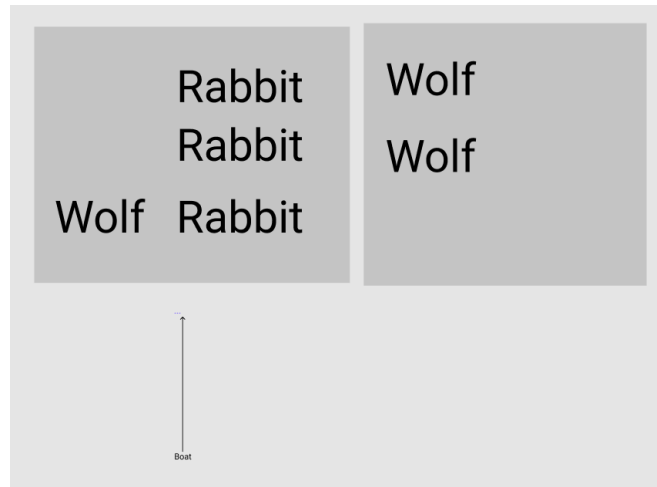
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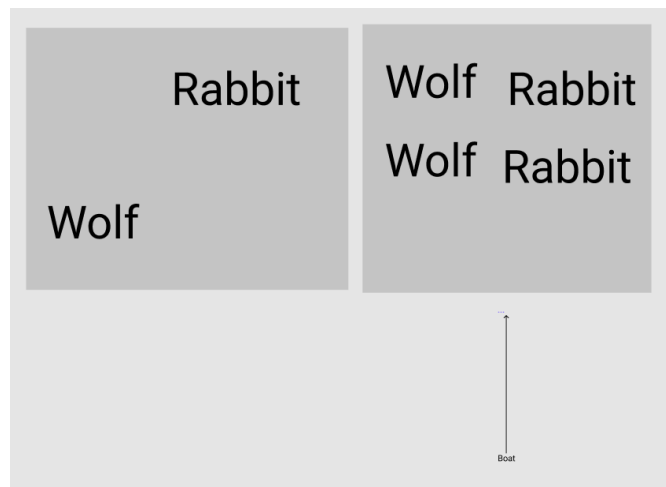
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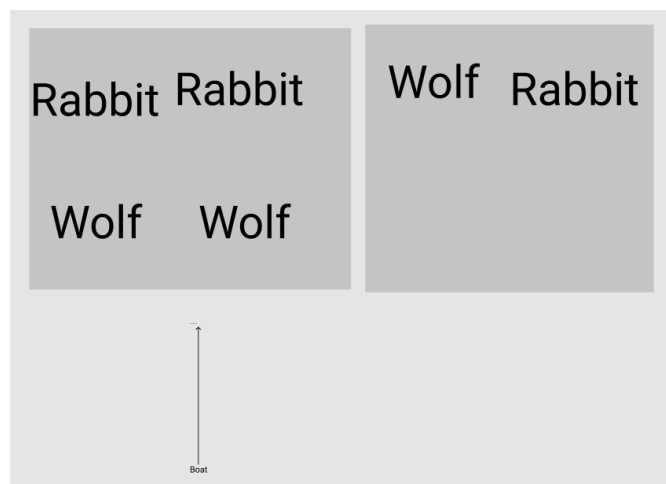
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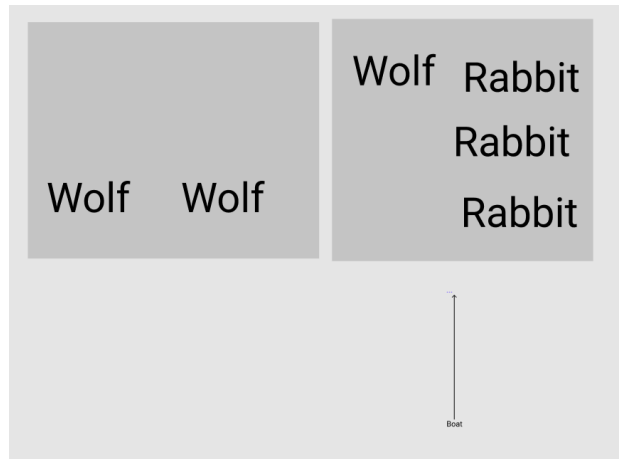
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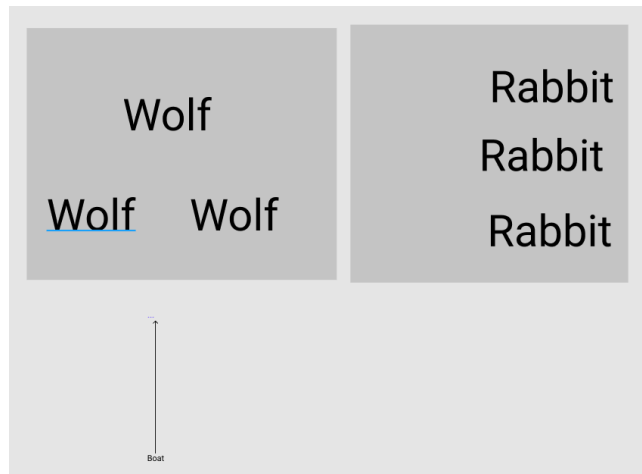
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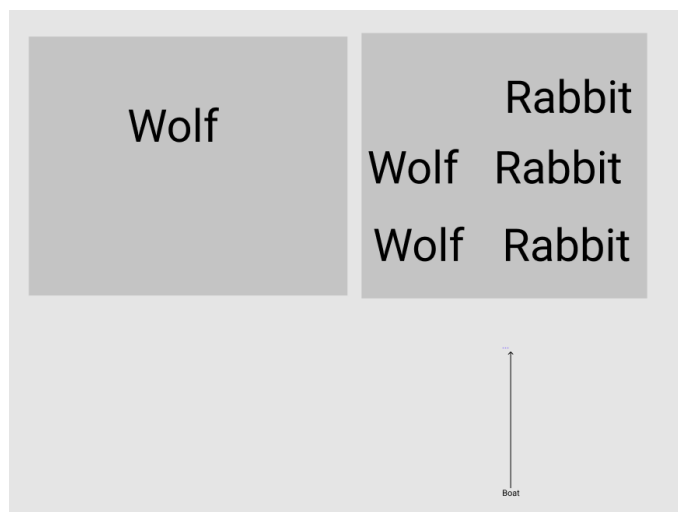
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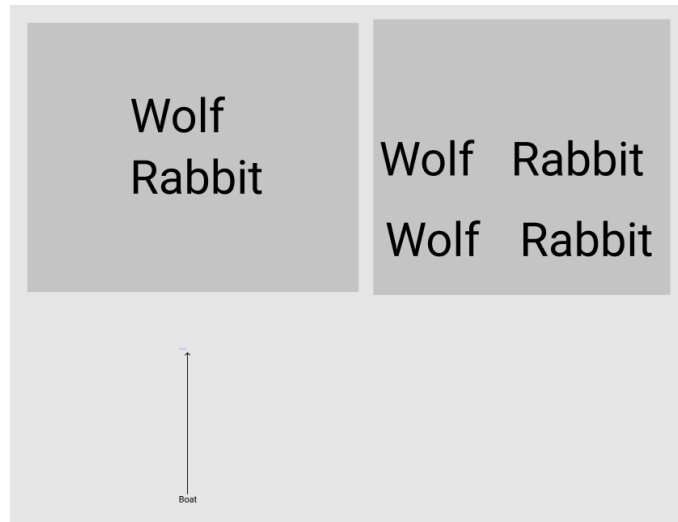
8



9



10



11 (End)

