search tree analysis

packages w/
size and gifts

unpacked gifts with size
and person's name

```
<pkg 5 ()>          <gift 3 X>
<pkg 8 ()>          <gift 4 Y>
                    <gift 2 Z>
```

```
<pkg 5 (<gift 3 X>)>
<pkg 8 ()>          <gift 4 Y>
                    <gift 2 Z>
```

```
<pkg 5 ()>
<pkg 8 (<gift 3 X>)>   <gift 4 Y>
                       <gift 2 Z>
```

gift size 4 cannot go
into 1st pkg

```
<pkg 5 (<gift 3 X>)>
<pkg 8 (<gift 4 Y>)>
                    <gift 2 Z>
```

```
<pkg 5 (<gift 4 Y>)>
<pkg 8 (<gift 3 X>)>
                    <gift 2 Z>
```
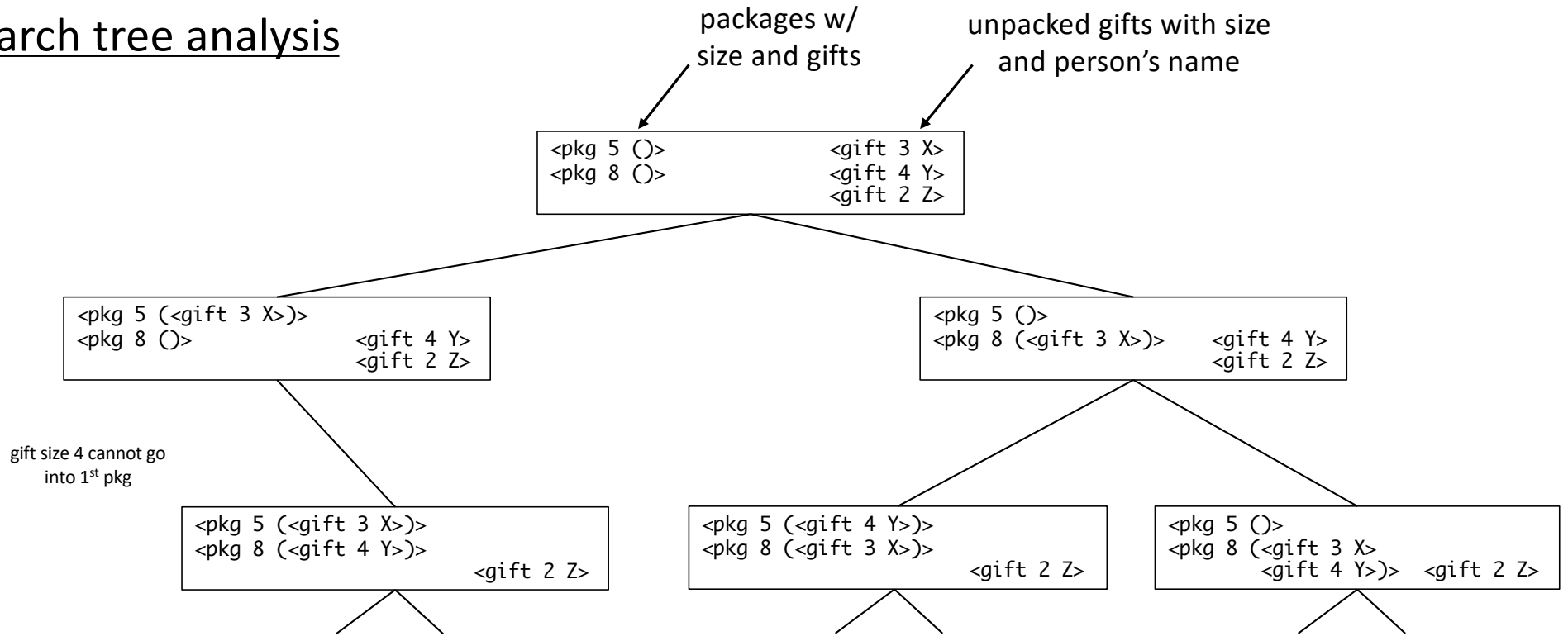
```
<pkg 5 ()>
<pkg 8 (<gift 3 X>
       <gift 4 Y>)>  <gift 2 Z>
```

search state includes all packages
with their size and contents

to form next search states:
assign first unpacked gift to every
package that has room for it

succeed: no unpacked gifts