

HW #0 Solutions

1.)

a.)

| |
|----|
| 4 |
| 3 |
| 2 |
| 1 |
| NO |
| NO |
| NO |

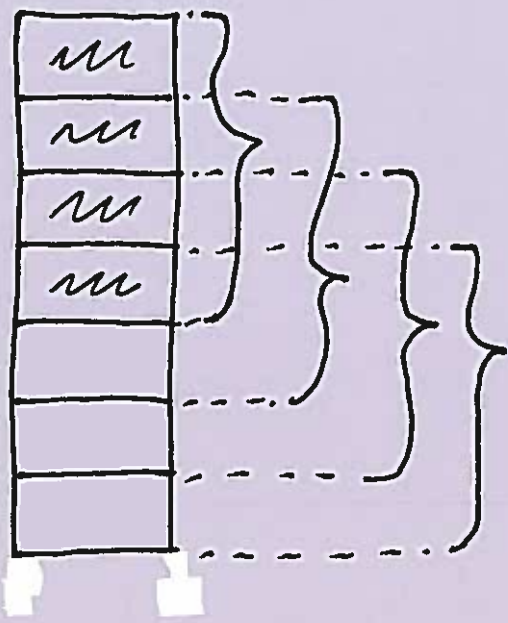
$$4 \cdot 3 \cdot 2 \cdot 1 = 24 \text{ ways}$$

b.)

| |
|----|
| 4 |
| NO |
| 3 |
| NO |
| 2 |
| NO |
| 1 |

$$4 \cdot 3 \cdot 2 \cdot 1 = 24 \text{ ways}$$

c.)



4 placements

$$\frac{4!}{\text{order 4 shoes}} \cdot \frac{4}{\text{place the shoes}} = 96 \text{ ways}$$

d.)

$$\frac{4}{\text{place the 4 shoes}} \cdot \frac{3}{\text{place black and pink shoes}} \cdot \frac{2}{\text{order black and pink shoes}} \cdot \frac{2}{\text{order other 2 pairs}} \cdot \frac{1}{1} = 48 \text{ ways}$$