

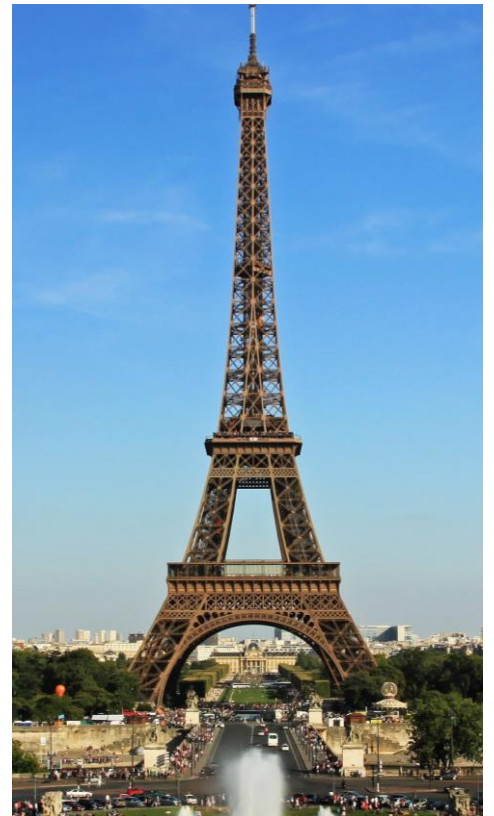
Paris Las Vegas

Las Vegas contains a scaled down replica of the Eiffel Tower.



Assuming the two towers are similar, complete the table below:

| | Paris | Las Vegas |
|-------------------|----------------------|----------------------|
| Height | <i>324 metres</i> | |
| Paint used | <i>50,000 litres</i> | <i>12,500 litres</i> |
| Weight | | <i>1250 tonnes</i> |



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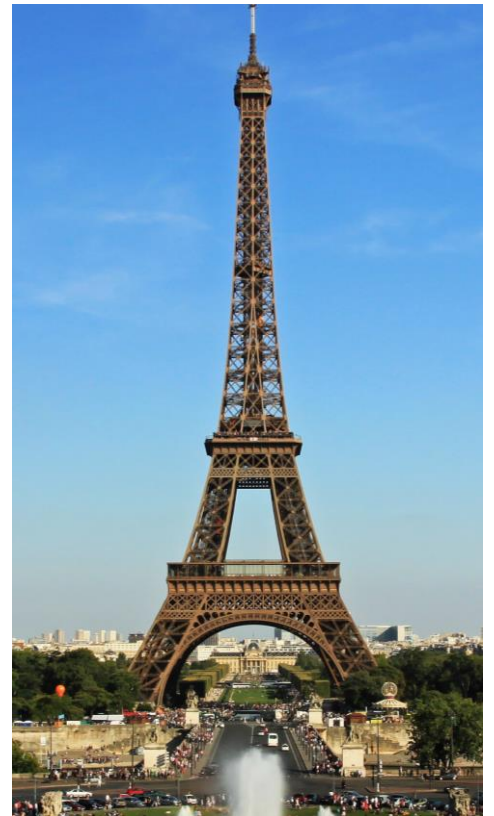
Paint used is proportional to area, so:

$$\text{Area Scale Factor } ASF = \frac{50,000}{12,500} = 4$$

$$ASF = LSF^2, \text{ so } LSF = \sqrt{4} = 2$$

$$VSF = LSF^3, \text{ so } VSF = 2^3 = 8$$

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