

Modeling with Geometric Figures: Question 2

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The total volume of rock is:

$$V = \frac{8ft^3}{1\text{pound}} \quad (1)$$

$$V_{total} = 300 * 8 = 2400ft^3 \quad (2)$$

The maximum volume for each dump truck is :

$$V_{truck} = 9 * 12 * 8 = 864ft^3 \quad (3)$$

The number of trucks needed to deliver the rock in one trip is:

$$n_{trucks} = \frac{2400}{864} \approx 2.777778 \quad (4)$$

3 trucks are needed to deliver the rock in one trip.