

GROUP NAME: Engineers

Student Names (First and Last)

Logo:

Speaker/Presenter: Dan

Date: \_\_\_\_\_

Writer/Prep: Chris

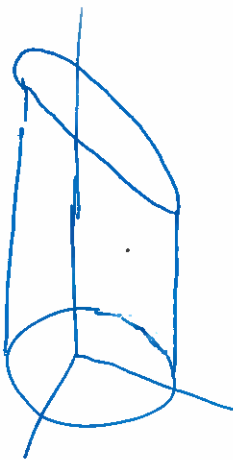
Topics:

QC/Leader: Min S.M.D

Matt Persico

Instructions:

SET UP The triple Integral of the rounded building



Eq of roof

$$2x + 2y + 15z = 1500$$

$$= 2\cos\theta + 2\sin\theta + 15z = 1500$$

$$\int_{\theta=0}^{2\pi} \int_{r=0}^{\frac{75}{2}} \int_{z=0}^{\frac{1500 - 2\cos\theta - 2\sin\theta}{15}}$$

$$z = \frac{1500 - 2\cos\theta - 2\sin\theta}{15}$$

$$\int_{z=0}^1 \int_{\theta=0}^{2\pi} \int_{r=0}^{\frac{75}{2}} r \left( \frac{1500 - 2\cos\theta - 2\sin\theta}{15} \right) dr d\theta dz$$

$$= 140,625\pi \approx 441,786$$

GROUP NAME: Bio

Student Names (First and Last)

Logo:

Speaker/Presenter: Shawnee

Date: \_\_\_\_\_

Writer/Prep: Piyush

Topics: Triple Integrals in Cylindrical Coordinates

QC/Leader: James

Instructions:

$$z = 1.53x + .96y + 9.517$$

$$= 1.53(r \cos \theta) + .96(r \sin \theta) + 9.517$$

$$\int_0^{2\pi} \int_0^{250} \int_0^{1.53r \cos \theta + .96r \sin \theta + 9.517} r dz dr d\theta$$

$$\int_0^{2\pi} \int_0^{250} (1.53r \cos \theta + .96r \sin \theta + 9.517) r dr d\theta$$

$$\Rightarrow \dots$$

GROUP NAME: Team OP

Logo:



Date: 11/7/13

Topics: Triple integrals (cylinder)

Student Names (First and Last)

Speaker/Presenter: \_\_\_\_\_

Writer/Prep: \_\_\_\_\_

QC/Leader: Javier Blanco

Instructions: Set up building as triple integral.

$$z = 28.99x + 113.5y + 11501.5 = f(x, y)$$

$$z = 28.99(x-50) + 113.5(y-50) + 11,501.5$$

$$\int_0^{2\pi} \int_0^{50} \int_0^{28.99(50 \cos \theta) + 113.5(50 \sin \theta) + 11501.5} dz dr d\theta$$

$$= 9.03 \times 10^7$$

