

Name _____

Volcanoes Answer Key

1. The volume of lava erupted is $1000 \times 10^2 = 100,000$ cubic meters.
2. The area covered by the ash cloud is πr^2 square kilometers.
3. The total amount of carbon dioxide released after d days is $500d$ metric tons.
4. The energy released is $10^4 = 10,000$ units.
5. The radius of the volcanic crater is $500 / 2 = 250$ meters.
6. The total heat generated is $100,000t$ kilojoules.
7. The total time to clean up the ash is $5 \times 100 = 500$ hours.
8. The volume of the volcanic crater is $(1/3)\pi r^{2d}$ cubic meters.
9. The temperature after t hours is $500 - 10t$ degrees Celsius.
10. The energy released is $2 \times 10^{12} \times 1,000,000 = 2 \times 10^{18}$ joules.

