Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_ Period: \_\_\_\_\_\_ Date: \_\_\_\_\_

**8.2B Volumes of Cones\_Classwork**

*Objective: find the volumes of cones, find the heights of cones given the volumes, solve real-life problems (CC.SS.8.G.9\_MP4 Model with Mathematics)*

*Video:* [*https://www.youtube.com/watch?v=2T7YxFVCVwI*](https://www.youtube.com/watch?v=2T7YxFVCVwI) *or* [*https://www.youtube.com/watch?v=Ex-peEPTWGI*](https://www.youtube.com/watch?v=Ex-peEPTWGI)

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| FORMULA FOR VOLUME OF A CONE: $V=\frac{1}{3}πr^{2}h or V= \frac{πr^{2}h}{3}$ or $ V=\left(πr^{2}h\right)÷3$ |

**FIND THE HEIGHT OF THE CYLINDER GIVEN VOLUME & RADIUS OR DIAMETER.**

**Round to the nearest hundredth.**

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| **EXAMPLE NOTES**

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| **1.**Find the height.  | **2.**Find the diameter of a cone with a volume of 3,768 cubic centimeters and a height of 9 cm. |

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| 1. Find the height. | 2. Find the height.  |
| 3. Find the diameter of a cone with a volume of 1,256 in3 and a height of 12 in. |

HW: (8.2B) p. 347 (#1-8, 10) Solution: 1) $≈44 yd^{3}$ 2) $≈113.1 ft^{3}$ 3) $≈157.1 cm^{3}$ 4) $≈414.7 in^{3}$ 5) $≈12 ft$ 6) $≈13.8 cm$ 7) $≈9cm$ 8) $27 times greater$ 10) $13.5in$

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| 1. You must answer a trivia question before the sand in the timer falls to the bottom. The sand falls at a rate of 50 cubic millimeters per second. How much time do you have to answer the question? Round to the nearest hundredth.

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| 1. LEMONADE STAND: You have 10 gallons of lemonade to sell. ($1 gal≈3785 cm^{3}$)
2. Each Customer uses one paper cup. How many paper cups will you need? \_\_\_\_\_\_\_\_\_\_\_\_\_
3. The cups are sold in packages of 50. How many packages should you buy? \_\_\_\_\_\_\_\_\_\_\_\_\_

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| 1. Find the Height. Round to the nearest tenth.

 | 1. Find the diameter. Round to the nearest tenth.

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