**Finding Volume and Solving for a Variable**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Important Formulas**

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| --- | --- | --- |
| **Shape** | **Formula** | **Picture** |
| **Triangle** | **Area =**  |  |
| **Parallelogram** | **Area =**  |  |
| **Trapezoid** | **Area =**  |  |
| **Circle** | **Area =** **Circumference =** |  |
| **Cylinder** | **Volume =**  |  |
| **Rectangular Prism** | **Volume =**  |  |
| **Triangular Prism** | **Volume =**  |  |
| **Pyramid** | **Volume =**  |  |
| **Cone** | **Volume =**  |  |
| **Sphere** | **Volume =**  |  |

Examples

1. Solve the equation $A=\frac{1}{2}h\left(b\_{1}+b\_{2}\right), for h.$
2. Solve the equation $V=lwh, for h.$
3. Solve the equation $V=πr^{2}h, for r.$
4. A cylinder has a radius equal to 6cm and a height equal to 10cm, what is the volume of this cylinder?
5. A square pyramid has a height equal to 9cm and a volume equal to 27cm3, what is the length of each side of the pyramid’s base?
6. A sphere has a radius equal to 3cm, what is the volume of this sphere?

Independent Practice

1. Solve the equation $V=\frac{1}{3}πr^{2}h, for h.$
2. Solve the equation $A=πr^{2}, for r.$
3. A rectangular prism has a volume equal to 42cm3, a height equal to 7cm2, and a length equal to 3 cm2, how wide is the rectangular prism?
4. A cone has a height equal to 12cm and a circumference equal to 4π cm, what is the volume of the cone?