

1. At one point of the Grand Cañon of the Colorado the walls rise 7000 ft. above the river. If a boulder weighing several tons were rolled over the edge of the precipice at the top, how long would it be before the crash of the stone on the rocks below would be heard by a person at the top?
2. The intensity or loudness of a sound varies inversely as the square of the distance. If A is 50 rd. from a bell, and B is 70 rd. from it, how will the loudness of the sound as heard by B compare with the loudness as heard by A?
3. Find the capacity in quarts of a pail in the form of a right cylinder 6.5 in. in diameter and 8.7 in. high.
4. Find the capacity in pecks of a cylindrical box $18\frac{1}{2}$ in. in diameter and $24\frac{1}{2}$ in. deep.
5. A stack of hay in the form of a cone whose diameter is 10 ft. must be how high to contain 100 cu. yd.?
6. If a cubic foot of a certain kind of stone weighs 160 lb., how much will a cubical block of the same kind of stone weigh whose edge is $2\frac{1}{2}$ ft.? How long is the edge of a cubical block of stone that weighs 600 lb.?
7. If a cubic inch of water weighs 252.722 grains, what must be the edge (inside measure) of a cubical vessel that will contain 80 pounds of water?
8. How many barrels of apples will it take to fill a bin 18 ft. long, 6 ft. wide, and $4\frac{1}{2}$ ft. high?
9. Gold melts at about 1200° C. What is that Fahrenheit?
10. Wrought iron melts at about 1600° C. What degree F.?
11. A stone dropped from a balloon reached the ground in 7 seconds. How high was the balloon?
12. The Liberal Arts building at the Chicago World's Fair was 210 ft. in height. How long would it take a body to fall to the floor? The Eiffel Tower at the Paris Fair was 985 ft. in height. How long would a body be in falling from the top?
13. What is the length of a pendulum that beats half seconds? that makes one vibration in two seconds?
14. A pendulum is $4.77 +$ in. long. How often will it vibrate?