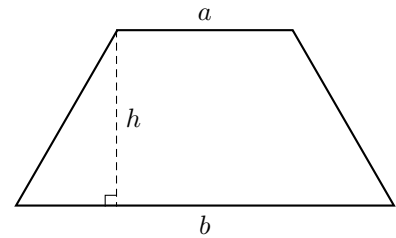


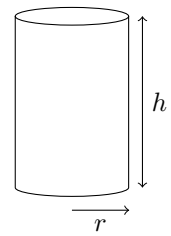
1. Write a program that calculates then outputs the area of a trapezoid. The user should be able to pick both bases and the height (that is: a , b , and h).

Hint: $A = \frac{a+b}{2}h$



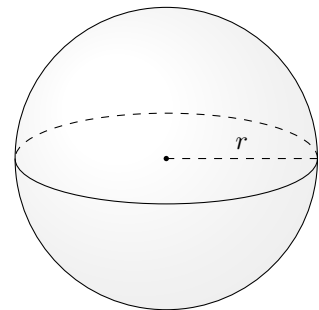
2. Write a program that calculates the volume of a cylinder. The user should be able to pick the height and radius. Use the value of π from the math module in your calculation.

Hint 2: $V = \pi r^2 h$



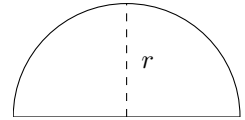
3. Write a program that calculates and then outputs the volume of a sphere. The user should be able to pick the radius. Use the value of π from the math module in your calculation.

Hint: $V = \frac{4}{3}\pi r^3$



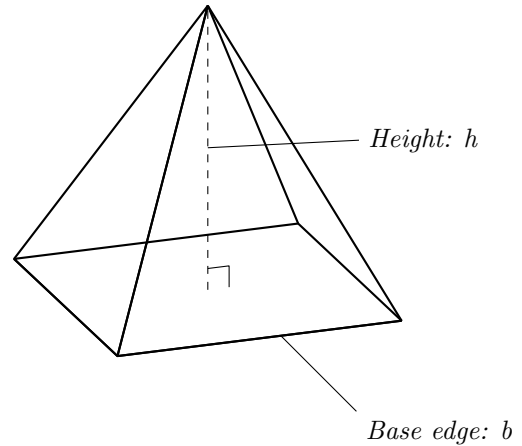
4. Write a program that calculates and then outputs the area of a semi-circle. The user should be able to pick the radius. Use the value of π from the math module in your calculation.

Hint: $A = \frac{1}{2}\pi r^2$



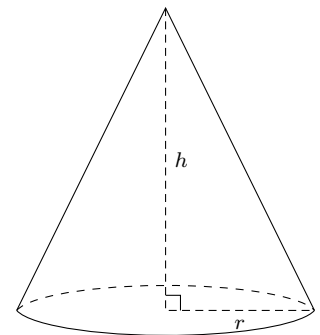
5. Write a program that calculates then outputs the volume of a right square pyramid. The user should be able to pick b (the base edge) and h (the height).

Hint: $V = \frac{b^2 h}{3}$



6. Write a program that calculates then outputs the volume of a cone. The user should be able to pick r (the radius) and h (the height). Use the value of π from the math module in your calculation.

Hint: $V = \pi \cdot \frac{r^2 h}{3}$



7. You are counting points for a basketball game. Ask the user the amount of 3-pointers scored and the amount 2-pointers scored, find the final points for the team and output the value.
 For example, if a team scored 5 2-pointers and 7 3-pointers, then their score would be 31.
 If a team scored 6 2-pointers and 5 3-pointers, then their score would be 27.
8. A farmer is asking you to tell him how many legs can be counted among all his animals. The farmer breeds three species:
- chickens, which have **2** legs

- cows, which have 4 legs
- pigs, which have 4 legs

Write a program that asks the farmer how many of each animal he has, and then outputs the total number of legs. For example,

```
How many chickens do you have?: 5
How many cows do you have?: 1
How many pigs do you have?: 3
The total amount of legs on your farm is 26.
```

```
How many chickens do you have?: 3
How many cows do you have?: 4
How many pigs do you have?: 7
The total amount of legs on your farm is 50.
```