

## Section 1: Part D

### Possible Scripts for Meteor Hitting Roof

*(Try to have the kids come up with a plan first! A group discussion will help get everyone in the same place. Don't let them copy and paste, there are many ways to do this!)*

```
number radius = cast(number, input("Type in the radius of the Earth in feet"))
number SA = 4*3.141*radius*radius
number length = cast(number, input("Type in the length of the roof in feet"))
number width = cast(number, input("Type in the width of the roof in feet"))
number Roofarea = length*width
output"The surface area of the roof is " + Roofarea + " square feet"
say"The surface area of the roof is " + Roofarea + " square feet"
output"The Surface area of the Earth is " + SA + " square feet"
say "The Surface area of the Earth is"+ SA + "square feet"
number probability = 1/(Roofarea/SA)
output "Probability of a meteorite striking the roof of a typical house " + probability
say "Probability of a meteorite striking the roof of a typical house is one out of " + probability
```

**Alternatively, instead of the line:**

*number probability = 1/(Roofarea/SA)*

You could use:

***number probability = Roofarea/SA***

And then use output (and say)

***output "One out of " + probability***

**A third way, depending on math ability, gives the square footage already calculated**

```
number Earth's square footage=5,490,000,000,000,000
```

```
number average house square footage=2,500
```

```
output (number Earth's square footage/number average house square footage)
```

1 in 2,196,267,379,587 chance