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Day 3 code

EGR 101

```
format compact
```

Given distance and x1, y1, and y2, what must x2 be?

```
d = 5; % distance [in cm]
x1 = -1; % x position point 1[cm]
y1 = 2; % y position point 1 [cm]
y2 = 6; % y position point 2[cm]

% x position pt. 2 [cm]
x2 = sqrt(d^2-(y2-y1)^2)+x1

x2 =
    2
```

turn values into vectors

```
xs = [x1 x2]; % x value
ys = [y1 y2]; % y value

% find the midpoint
xMean = mean(xs)
yMean = mean(ys)

% how many points in each array?
length(xs)
length(ys)

xMean =
    0.5000
yMean =
    4
ans =
    2
ans =
    2
```