

## On the Subject of Soil Classification

Finally time to get your hands dirty.

Determine the correct type of soil, the percentage make up of sand, silt and clay can be calculated using the tables below.

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### Determining shapes in the soil sample

Number of Batteries	0 or 7+	1-2	3-4	5-6
Sand	Red Square	Blue Triangle	Green Circle	Green Triangle
Silt	Blue Circle	Yellow Circle	Yellow Square	Red Circle
Clay	Yellow Triangle	Green Square	Red Triangle	Blue Square

#### 1. Sand percentage

Start from 0% and using the following table add or subtract percentage points for each instance of the item in the left column which is present on the bomb.

If the sum is negative, multiply it by -2. Note that this value may change during step 3.

Pair of AA batteries	+6%	DVI-D port	+9%
RJ-45 port	+6%	Unlit indicator	+4%
Sand shape in the soil sample	+13%	Clay shape in the soil sample	-2%

#### 2. Silt percentage

Start from 0% and using the following table add or subtract percentage points for each instance of the item in the left column which is present on the bomb.

If the sum is negative, multiply it by -2. Note that this value may change during step 3.

D Battery	+7%	Parallel port	+8%
Stereo RCA port	+7%	Lit indicator	+4%
Silt shape in the soil sample	+12%	Clay shape in the soil sample	-4%

### 3. Clay percentage

Start by using the following equation:

$$\text{Clay\%} = 100\% - \text{Sand\%} - \text{Silt\%}$$

If the value of the soil's clay percentage is a positive value between 0 and 100, move onto step 4, otherwise follow the following steps to figure out the true clay percentage.

Multiply the clay percentage by -1, then subtract the new clay percentage from the sand and silt percentages, then if all 3 percentages are now positive move to step 4. Subtract any negative percentages from the largest percentage then set the value of the negative percentages to 0. If there is a tie for the largest percentage, subtract from clay.

### 4. Soil type

Use the following diagram to work out the soil type, **if the point between the 3 percentages is exactly on a line then take the soil type on the side of the line which is closest to the bottom left corner of the diagram**. Submit the soil type found.

