How Computers make decisions

Computers can't make decisions on their own. Humans have to "program" every decision they make. A human tells a computer if it should do **this** or **that**. This is done by a system called **if-else** statements. Basically you tell a computer "**If** this is true then do this, **else** do that."

How to make decisions like a computer:

Determine whether the statement inside the parenthesis after the keyword **if** is **true** or **false**. If it is **true**, then you will do what is next. If the statement is **false**, you will do what is after the **else** statement.

Your Turn! Perform the operations like a computer.

```
if (3 + 2 = 5) {
                                         if (5 + 4 = 8) {
     draw a red circle
                                               draw a green star
} else {
                                          } else {
     draw a blue circle
                                               draw a purple star
}
                                         }
if ( squares have 4 sides ) {
                                         if ( squares have 4 sides ) {
     draw a green triangle
                                               draw a blue square
} else {
                                          } else {
     draw a blue triangle
                                               draw a orange square
}
                                         }
if (5 * 2 = 10) {
                                         if (3 * 4 = 14) {
     draw a yellow circle
                                               draw a black star
} else {
                                          } else {
     draw a blue circle
                                               draw a blue star
}
                                         }
if (2 + 2 = 3) {
                                         if (1 * 1 * 1 = 1) {
     draw a purple triangle
                                               draw a black square
} else if ( 2 + 2 = 4 ) {
                                          } else if ( 1 * 1 * 1 * 0 = 1 ) {
     draw a pink triangle
                                               draw a brown square
} else {
                                          } else {
     draw a black triangle
                                               draw a teal square
}
                                         }
```

Solutions How Computers make decisions

Computers can't make decisions on their own. Humans have to "program" every decision they make. A human tells a computer if it should do **this** or **that**. This is done by a system called **if-else** statements. Basically you tell a computer "**If** this is true then do this, **else** do that."

How to make decisions like a computer:

Determine whether the statement inside the parenthesis after the keyword **if** is **true** or **false**. If it is **true**, then you will do what is next. If the statement is **false**, you will do what is after the **else** statement.

if (3 + 2 = 5) { if (5 + 4 = 8) { draw a red circle draw a green star } else { } else { draw a blue circle draw a purple star } } if (squares have 4 sides) { if (squares have 4 sides) { draw a green triangle draw a blue square } else { } else { draw a blue triangle draw a orange square } } if (5 * 2 = 10) { if (3 * 4 = 14) { draw a yellow circle draw a black star } else { } else { draw a blue circle draw a blue star } } if (1 * 1 * 1 = 1) { if (2 + 2 = 3) { draw a purple triangle draw a black square } else if (2 + 2 = 4) { } else if (1 * 1 * 1 * 0 = 1) { draw a pink triangle draw a brown square } else { } else { draw a black triangle draw a teal square } }

Your Turn! Perform the operations like a computer.