

CONDITIONAL STATEMENTS

ASSIGNMENT

Evaluating Conditional Statements:

For each conditional statement below, write "if," "else," or "none" to indicate which portion of the conditional statement will be executed:

Example:

if (a + d > b * c) System.out.println("If") else System.out.println("Else"); if (1 + 8 > 2 * 4) -> if (9 > 8) -> if (true)	if
if (a + d > b * d) System.out.println("If") else System.out.println("Else"); if (1 + 8 > 2 * 8) -> if (9 > 16) -> if (false)	else
if (a > b t) System.out.println("If") else System.out.println("Else"); if (1 > 2 true) -> if (false true) -> if (true)	if
if (a > b && (t && f)) System.out.println("If"); if (1 > 2 && (true && false)) -> if (true && (false)) -> if (false)	none

Variable Values	
Variable	Value
a	1
b	2
c	4
d	8
t	true
f	false

Answer below:

1	if (a - b > 0) System.out.println("If") else System.out.println("Else");	
2	if (a + b * c == a + d) System.out.println("If") else System.out.println("Else");	
3	if (a * b == c) System.out.println("If") else System.out.println("Else");	
4	if (d - c < c) System.out.println("If");	
5	if (a + b + c + d == b * c) System.out.println("If") else System.out.println("Else");	
6	if ((a * b == b) && (b * c > d)) System.out.println("If");	
7	if ((t f) && (t && f)) System.out.println("If");	
8	if ((t f) && (a + b + c == d) System.out.println("If") else System.out.println("Else");	
9	if (f && (d * d == 64) && (d > c) && (d * c * b * a < 2 * b + c + d)) System.out.println("If");	
10	if (b > a - c && d * d == (a + b + c + d) * c + c) System.out.println("If");	
11	if (t (d * d * d * d * d == 32768)) System.out.println("If") else System.out.println("Else");	
12	if (d - c < c) System.out.println("If");	
13	if (a * b + c + d == d + c + b) System.out.println("If");	
14	if (true && t) System.out.println("If");	

Evaluating a Complete Program:

Given the program below, track how each variable is evaluated, note changes to variable values, and indicate the results of conditional statements over the course of the program:

Example:

	Code	Summary
01	<code>public class ConditionalExample1 {</code>	
02	<code>public static void main(String[] args) {</code>	
03	<code>int a=1, b=2, c=4, d=8;</code>	a=1, b=2, c=4, d=8
04	<code>if (b > a - c && d * d == (a + b + c + d) * c + c) {</code>	2 > 1-4 && 8*8==15*4+4 2 > -3 && 64==64 true && true true
05	<code> a=a+b+c+d;</code>	a=1+2+4+8=15
06	<code> } else {</code>	skip
07	<code> a=-a;</code>	skip
08	<code> }</code>	
09	<code>System.out.println("a="+a+", b="+b+", c="+c+", d="+d);</code>	a=15, b=2, c=4, d=8

Now complete this program's summary:

	Code	Summary
01	<code>public class ConditionalPractice1 {</code>	
02	<code>public static void main(String[] args) {</code>	
03	<code>int i=1, j=3, k=6;</code>	
04	<code>if (2*j==k && i+j>k) {</code>	
05	<code> i=i*j*k;</code>	
06	<code> } else {</code>	
07	<code> i=-i;</code>	
08	<code> j=j*k+i;</code>	
09	<code> }</code>	
10	<code>System.out.println("i="+i+", j="+j+", k="+k);</code>	
11	<code>if (i>j*k) {</code>	
12	<code> j=k+j;</code>	
13	<code> k=i+j;</code>	
14	<code> } else {</code>	
15	<code> j=i*k+j;</code>	
16	<code> k=i;</code>	
17	<code> }</code>	
18	<code>System.out.println("i="+i+", j="+j+", k="+k);</code>	
19	<code> }</code>	
20	<code>}</code>	