

Q1

1. For each of the following expressions, determine the order of operations and the results.

The order is denoted by numbers ①, ②, ③...

(a) $\frac{-}{\textcircled{3}} (\frac{2}{\textcircled{2}} + \frac{3}{\textcircled{1}} / \frac{2}{\textcircled{4}}) * 4 = -14$

(b) $\frac{\text{Exp}}{\textcircled{1}} (\frac{-}{\textcircled{2}} 3 * \frac{2}{\textcircled{3}} / \frac{4}{\textcircled{4}} - \frac{7}{\textcircled{5}}) * \frac{2}{\textcircled{6}} = 0.000192223$

(c) $\frac{-}{\textcircled{2}} 2 * \frac{4}{\textcircled{1}} + \frac{4}{\textcircled{3}} / \frac{2}{\textcircled{4}} * \frac{9}{\textcircled{5}} = 2$

(d) $\frac{10}{\textcircled{1}} * \frac{2}{\textcircled{2}} > \frac{3}{\textcircled{3}} * \frac{2}{\textcircled{4}} = 20$

(e) $\frac{2}{\textcircled{1}} + \frac{3}{\textcircled{2}} = \frac{6}{\textcircled{3}} \mid \frac{3}{\textcircled{4}} \& \frac{0}{\textcircled{5}} = 0$

(f) $\frac{3}{\textcircled{1}} \text{ gt } \frac{2}{\textcircled{2}} = \frac{1}{\textcircled{3}} \Rightarrow (\frac{3}{\textcircled{4}} \text{ gt } \frac{2}{\textcircled{5}}) \& (\frac{2}{\textcircled{6}} = \frac{1}{\textcircled{7}}) = 0$

(g) $\frac{\wedge}{\textcircled{1}} (\frac{-}{\textcircled{2}} 3) + \frac{3}{\textcircled{3}} = 3$

(h) $\frac{4}{\textcircled{1}} \text{ in } (\frac{1}{\textcircled{2}}, \frac{2}{\textcircled{3}}, \frac{3}{\textcircled{4}}, \frac{4}{\textcircled{5}}, \frac{5}{\textcircled{6}}) \text{ and } \frac{2}{\textcircled{7}} = 1$

(i) $\frac{4}{\textcircled{1}} > \frac{3}{\textcircled{2}} \geq \frac{2}{\textcircled{3}} \Rightarrow (\frac{4}{\textcircled{4}} > \frac{3}{\textcircled{5}}) \& (\frac{3}{\textcircled{6}} \geq \frac{2}{\textcircled{7}}) = 1$

(j) $\frac{\text{not}}{\textcircled{1}} (\frac{'ab'}{\textcircled{2}} = \frac{'a'}{\textcircled{3}} \mid \mid \frac{'b''}{\textcircled{4}}) = 0$

Q2

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/* 2(a) */
x1=mdy(1,1,year+1)-mdy(1,1,year);

/* 2(b) */
if(scan(x2,3)^= '') then
    name=scan(x2,1)||' '
    || substr(scan(x2,2),1,1) ||'.'
    || substr(scan(x2,3),1,1) ||'.';
Else name=scan(x2,1)||' '||substr(scan(x2,2),1,1)||'.';

/* 2(c) */
det=b*b-4*a*c;
if det>=0 then x3=((-b+sqrt(det))/(2*a))
    <>((-b-sqrt(det))/(2*a));
else x3=.;

/* 2(d) */
dangle=52;
pi=constant('pi');
c=sqrt(a*a+b*b-2*a*b*cos(pi*dangle/180));

/*2 (e) */
if length(y) le 1 then y=x4; else
y=substr(y,1,length(y)-1)||x4;
```
