

K201-Quiz 2A

(2 pts) 1. Indicate and explain errors (if any) in the following FORTRAN arithmetic statement:

```
B&Co = (2.PI-X1**-2*(I+1)) /L23
```

↑ ↑ ↑ ↙ ↘
1. 2. 3. 4.

1. special character in the variable
2. missing operator
3. operators not separated
4. unequal number of parentheses

(4 pts) 2. Translate the following mathematical expression into an equivalent FORTRAN expression:

$$\frac{(1-\frac{x^2}{y})(2-\sqrt{xy})}{2x^2-5y} + 1$$

$$(1-x**2/y)*(2-(x*y)**.5)/(2.*x**2-5.*y)+1.$$

(6 pts) 3. Evaluate the following sequence of FORTRAN statements, given R1=3.:

$$R2 = (3.5 - R1 / 2.) ** 2 - 1. = (3.5 - 1.5)^2 - 1. = (2.)^2 - 1. = 4. - 1. = 3.$$

$$R3 = (R2 ** 2 - 2. * R1) / 3. + 1. = (3.^2 - 2 * 3.) / 3. + 1. = (9. - 6.) / 3. + 1. = 3. / 3. + 1. = 1. + 1. = 2.$$

$$K2R = (R1 / R2 + 1.) / (R3 - 1.) + 1.5 * R2 = (3. / 3. + 1.) / (2. - 1.) + 1.5 * 3. = (1. + 1.) / 1. + 4.5 = 2. + 4.5 = 6$$

(8 pts) 4. Consider the following card layout:

Card Columns	Description	Form	Variable name
10-14	Item #	Integer	INØ
15-33	Item name	Alphanumeric	N1, N2, N3, N4, N5
39-41	No. of items sold	Integer	NØIS
55-59	Unit price	XXX,XX	UP

- a) define variable names
- b) write FORTRAN statements necessary to read a card with given layout.

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1	5	6	7	10	15	20	25	30	35	40	45	50	55	60
				READ	(5, 3),	INØ	N1,	N2,	N3,	N4,	N5,	NØIS,	UP	
3				FORMAT	(4X,	I5,	4A4,	A3,	5X,	I3,	13X,	F5.2)		