

## FUNKSIONELE WISKUNDE SG VRAESTEL 1

Die kandidate se werk was netjies en ordelik. Die instruksies is goed geïmplementeer, met die uitsondering van sekere kandidate wat nie die instruksie dat elke vraag op 'n nuwe bladsy gedoen moet word, nagekom het nie. Afrondingsprobleme het vanjaar minder voorgekom.

Die rangorde van die beste[1] tot die swakste[7] beantwoorde vraag verskyn in hakkes langs die vraag.

### **VRAAG 1: EKSPONENTE [1]**

Hierdie vraag is oor die algemeen baie beter beantwoord as in vorige jare.

Algemene fout waarteen gewaak moet word:  $(3^4)^{x+1} = 3^{4x+1}$

Sakrekenaars is gebruik by vrae waar dit onnodig was.

### **VRAAG 2: LOGARITMES [4]**

Hierdie vraag is swak beantwoord.

Die volgende foutiewe interpretasie het baie voorgekom:  $2\log 15 - \log 135 + \log 3 = \log \frac{225}{135.3}$

$$\log_2 x = 3,4$$

$$x = 2^{3,4}$$

Sakrekenaars is algemeen gebruik by vrae waar dit uitdruklik verbied was.

### **VRAAG 3: GRAFIEKE [3]**

Hierdie vraag is goed beantwoord. Die logaritmiëse grafiek benodig meer aandag. Meer aandag moet ook gegee word aan die aflees van punte asook waar dit aangedui moet word.

### **VRAAG 4: NUMERIESE METODES [5]**

Die kandidate het die vraag beter verstaan, omdat daar gebruik gemaak is van 'n gegewe tabel om die halveringsmetode te toets. Baie het egter steeds nie 'n begrip van wat 'n nulpunt is nie.

### **VRAAG 5: RYE & REEKSE [2]**

Vraag 5 is goed beantwoord. Verwarring heers steeds tussen  $T_n = 26$  en  $T_{26}$ .

Die toepassingsvraag (5.5) oor salarisse is deur baie kandidate slegs gesien as 'n wiskundige probleem en nie binne die perspektief van die werklikheid nie. Die antwoorde was dus buitensporig groot.

### **VRAAG 6: DIFFERENSIAALREKENING [6]**

Die kandidate hanteer hierdie afdeling van die vraestel baie swak. Limiete wat eers vereenvoudig moet word, is ook verkeerd geïmplementeer en tekenfoute het algemeen voorgekom.

Grondbeginsels is in menige geval slegs 'n gememoriseerde metode.

### **VRAAG 7: DIFFERENSIAALREKENING [7]**

Hierdie vraag is uiters swak beantwoord. Klem moet beslis gelê word op toepassingsvrae in die differensiaalrekening.

## FUNCTIONAL MATHEMATICS SG PAPER 1

The candidates answers were presented in a neat and orderly manner. Instructions were followed, with the exception of some candidates who did not start each new question on a new page. This year, fewer problems occurred with the rounding off of answers.

The numbers in brackets below indicate the order from best-answered [1] to worst-answered [7] questions.

### QUESTION 1: INDICIES [1]

This question was, generally speaking, better answered than in previous years.

Candidates should try to avoid general mistakes like:  $(3^4)^{x+1} = 3^{4x+1}$

Calculators were used when not necessary.

### QUESTION 2: LOGARITHMS [4]

Although this question was better answered than the one about exponents,

the following misinterpretation often occurred:  $2\log 15 - \log 135 + \log 3 = \log \frac{225}{135.3}$

$$\log_2 x = 3,4$$

$$x = 2^{3,4}$$

Calculators were often used where they were specifically prohibited.

### QUESTION 3: GRAPHS [3]

Well-answered by most candidates. The logarithm graph needs more attention – in particular, the reading of points and the indicating of these on a graph.

### QUESTION 4: NUMERICAL METHODE [5]

The candidates understood the question on the interval bisecting method better because of the given table. Many still did not understand the term *zero point*.

### QUESTION 5: SEQUENCES & SERIES [2]

A well-answered question. However, confusion still occurred between  $T_n = 26$  en  $T_{26}$ .

The application question (5.5) on salaries was seen by many candidates as a mathematical problem and not from a real-life perspective. The answers were therefore extremely large.

### QUESTION 6: CALCULUS [6]

The candidates did not do well in this section of the paper. Limits that had to be simplified first, were implemented incorrectly and sign mistakes occurred frequently. In many cases, first principles were just a memorized method.

### QUESTION 7: CALCULUS [7]

A very poorly answered question. Application questions in calculus need more attention.