



15th Internet Seminar on Evolution Equations Operator Semigroups for Numerical Analysis

QUIZ

Name of the table:	
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1. How many virtual lecturers are there this year?

A 42

B $\frac{\sqrt{128}\pi}{9801} \sum_{n=0}^{\infty} \frac{(4n)!}{(n!)^4} \cdot \frac{1103+26390n}{396^{4n}}$

C π

D 0

2. How many student participants are there at the workshop?

A 35

B 42

C 49

D 53

3. From how many countries?

A 8

B 9

C 11

D 14

4. How many participants attended the present workshop who were also there at the very first ISEM workshop in 1998?

A 2

B 3

C 4

D 5

5. What is the percentage of female participants (inclusive coordinators, virtual lecturers, and guests)?

A 18%

B 28%

C 38%

D 48%

6. The person consuming the most beer (as of Wednesday midnight) drank exactly how many bottles?

A 7

B 10

C 23

D 1024

7. Which color does not appear among the projects?

A Aqua

B Lime

C Orchid

D Peach



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8. How high is the mountain *Hechenberg* (Innsbruck) which is on the poster?

- A 825m
- B 1405m
- C 1943m
- D 2012m

9. How high is the highest point in *Austria*?

- A 1014m
- B 2962m
- C 3798m
- D 4478m

10. How high is the highest point in *Hungary*?

- A 1014m
- B 2962m
- C 3798m
- D 4478m

11. Which of the following ingredients are **not** needed for the original *Hungarian goulash soup*.

- A carrot
- B pork meat
- C red pepper
- D onion

12. What is a *Kiachl*?

- A A Tyrolean cake.
- B A Hungarian swearword.
- C A bird which lives in the high Alpine regions.
- D A Hebrew word of prayer.



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13. How deep is the *Blautopf* (Blaubeuren)?

- A 5m
- B 16m
- C 19m
- D 22m

14. A bakery in Blaubeuren bears a name of a famous mathematician. Who is this person?

- A Baker
- B Campbell
- C Gauß
- D Hausdorff

15. How old would be Heinrich Fabri if he was still alive?

- A 257 years old
- B 275 years old
- C 572 years old
- D 725 years old

16. When was the *Rusenschloss* (Blaubeuren) built?

- A 10th century
- B 11th century
- C 12th century
- D 13th century

17. How long is the shortest walk from Heinrich Fabri Institute to Blautopf?

- A 700m
- B 1000m
- C 1300m
- D 1700m

18. Which is the tallest object?

- A Matthias Church (Budapest)
- B Rocket Saturn V (incl. spacecraft Apollo)
- C Stephansdom (Vienna)
- D Ulmer Münster (Ulm)



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19. Which one was the longest lecture (L^AT_EX source character count)?
- A Lecture 1 (What is the Topic of this Course?)
 - B Lecture 2 (Fundamentals of One-Parameter Semigroups)
 - C Lecture 9 (Analytic Semigroups)
 - D Appendix A (Basic Space Discretisation Methods)
20. Which one was the biggest lecture (PDF file size)?
- A Lecture 2 (Fundamentals of One-Parameter Semigroups)
 - B Lecture 9 (Analytic Semigroups)
 - C Lecture 12 (Rational Approximation)
 - D Lecture 13 (Rational Approximation and Analytic Semigroups)
21. Where does the word *Amgis* come from?
- A Germany
 - B Hungary
 - C Greece
 - D Austria
22. How many results do you get when you search for *operator semigroup* in google.de?
- A 72 000
 - B 662 000
 - C 5 930 000
 - D 8 890 000
23. How many results do you get when you search for "*numerical analysis*" in google.de?
- A 72 000
 - B 662 000
 - C 5 930 000
 - D 8 890 000
24. Which is the proper (1,3) Padé approximant for the exponential function e^z ?
- A
$$\frac{1 + \frac{1}{4}z}{1 + \frac{1}{4}z + \frac{1}{2}\frac{z^2}{2!} + \frac{1}{4}\frac{z^3}{3!}}$$
 - B
$$\frac{1 + \frac{1}{4}z}{1 - \frac{1}{4}z + \frac{1}{2}\frac{z^2}{2!} - \frac{1}{4}\frac{z^3}{3!}}$$
 - C
$$\frac{1+z}{1-z + \frac{z^2}{2!} - \frac{z^3}{3!}}$$
 - D
$$\frac{1 + \frac{1}{2}z}{1 + \frac{1}{2}z + \frac{1}{2}\frac{z^2}{2!} + \frac{1}{2}\frac{z^3}{3!}}$$



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25. In which year did *Peter Lax* get the Abel Price? And how much money did he receive with it?

- A 2002, approx. 480 000 Euros
- B 2002, approx. 480 000 Norwegian Kroner
- C 2005, approx. 480 000 Norwegian Kroner
- D 2005, approx. 480 000 British Pounds

26. When was *Martin Wilhelm Kutta* born?

- A 1856
- B 1867
- C 1900
- D 1905

27. What is the Erdős number of Leonhard Euler?

- A 0
- B 8
- C 80
- D ∞

28. What is the common between János Bolyai, Tycho Brahe, Christopher Columbus, Évariste Galois, and Carl Runge?

- A They were all mathematicians.
- B They were all freemongers.
- C They all died in a duel.
- D Moon craters are named after them.

29. Odd one out!

- A Favard
- B Hölder
- C Sobolev
- D Besov

30. If 3 hens lay e eggs in $2 + 3i$ days, how many hens lay 5 eggs in how many days?

- A $\frac{1+\sqrt{5}}{2}$
- B 42
- C $T(t)T(s) = T(t + s)$
- D $y_{n+1} = y_n + hf(t_{n+1}, y_{n+1})$