NICK-O-MATIC'S FEM17 QUIZ

Answers close to correct answers will be given partial points. Impressive answers will be given bonus points. Feel free to ask questions during the quiz if there is something unclear in the questions as you probably aren't the only one pondering about the same thing. Please return the pen with the paper. Battle time 60 minutes. Now best of luck! xd

A. Internal achievements

The compulsory FEM quiz section.

1. The top 15 of best internal total times is in alphabetical order *Bjenn, GRob, FinMan, hehe, John, Kazan, Madness, Morgan, Mielz, proDigy, Raven, Spef, talli, TorInge* and *Zweq.* Your task is now to give the top 10 in correct order.

> **Solution:**
>
> | | | | |
> |---|---|---|---|
> | 1. Kazan | 4. John | 7. talli | 10. hehe |
> | 2. Spef | 5. Madness | 8. Mielz | |
> | 3. Zweq | 6. Bjenn | 9. Raven | |
>
> Top 8 was correct by Zero (3 $1/2$ points), adi (3 $1/2$ points), Pawq (3 $1/4$ points) and Zweq (3 $1/4$ points).

4 points
(exact system too complicated to be explained here)

2. Name six kuskis from WR table #100.

> **Solution:** Bob, Cloud, dz, Eliaz, Janne, Jeppe, Jokke, IRK, Karlis, KD, kimitys, Mad-Man, mengerle, MGen, Mick, pajen, SoGe, Tibity, TorInge, ZeiZei and zyntifox.
>
> Mostly dz, Jeppe, Jokke, Karlis, TorInge and zyntifox were known. Zweq had pajen and Pawq had Cloud.
>
> Common wrong answers included for example Zweq, mr, px, MP, psy, Markku, Champi0N and John.
>
> The only one with 6 correct ones was Zweq, and Markku, adi and 8-ball had 5 correct ones.
>
> In general from part A Zweq collected 6$1/4$ points and adi 6 points.

3 points

B. Elma physics

Yes!

3. (a) Suppose that you are riding with $60\,\mathrm{fps}$. In elmameters per second[1] $\left(\frac{\mathrm{m_e}}{\mathrm{s}}\right)$, what is the minimal critical velocity that head of your Kuski needs to have so that you can get it through ground without dying? The diameter of the head in elmameters is $d = 0.476\,\mathrm{m_e}$ and the distance which the head moves when turned is $s = 0.18\,\mathrm{m_e}$. Turning is allowed.

4 points

> **Solution:**
>
> $60\,\mathrm{fps}$ (frames per second) means that the state of game is evaluated 60 times per second and the timestep is $\Delta t = \frac{1}{60}\mathrm{s}$. This means that if the head moves with velocity $\mathbf{v}$, then between two consecutive states of game the head moves a distance $\Delta\mathbf{r} = \Delta t\mathbf{v}$. If the head is intersecting a polygon in either of these states, the kuski dies. But if the head is moving fast enough, it can pass altogether the ground vertex between these two timesteps, and since Elma does not make a proofcheck to see if the head has travelled to the other side of the polygon, Kuski's head can survive going through ground without dying.
>
> The critical velocity for this can be obtained if the head is as close as possible to the border at the 1st timestep and in the 2nd timestep it ends up as close as the border as possible, but exactly to the other side. This distance can be reduced by turning, so the required minimal travelled distance $\Delta s_{\min}$ equals to diameter of the head minus the distance it travels by turning, i.e., $\Delta s_{\min} = d - s$. So for the critical velocity we have
>
> $$\Delta s_{\min} = d - s = v_{\min}\Delta t$$
> $$v_{\min} = \frac{d-s}{\Delta t} = \frac{0.476\,\mathrm{m_e} - 0.18\,\mathrm{m_e}}{\frac{1}{60}\mathrm{s}} = 60 \cdot 0.296\,\frac{\mathrm{m_e}}{\mathrm{s}} = 17.76\,\frac{\mathrm{m_e}}{\mathrm{s}}. \qquad (1)$$
>
> This was known by surprisingly many people.

(b) What is the minimal critical velocity that your wheel needs to have so that it is possible for it to go through ground? The diameter of the wheel is $D = 0.8\,\mathrm{m_e}$.

1 points

> **Solution:**
>
> This solution is very similar to the previous one, but there is one major difference When a wheel is intersecting a reuna in one gamestate, in the next gamestate the wheel has been projected to the reuna as illustrated by Fig.
>
> This is why it is enough that only the center point of the wheel is needed to cross the ground vertex between two gamestates, so we have that $\Delta s_{\min} = \frac{D}{2}$ and

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[1] Elmameters per second is not a frequently used unit, so in order to give you some feeling to it, the units in EOL speedometer are elmameters per second divided by a constant of $\frac{3125}{273} \approx 11.4$.

$$\Delta s_{\min} = \frac{D}{2} = v_{\min} \Delta t$$

$$v_{\min} = \frac{\frac{D}{2}}{\Delta t} = \frac{0.8\,\mathrm{m_e}}{2 \cdot \frac{1}{60}\mathrm{s}} = 60 \cdot \frac{1}{2} \cdot 0.8\,\frac{\mathrm{m_e}}{\mathrm{s}} = 24\,\frac{\mathrm{m_e}}{\mathrm{s}}. \tag{2}$$

This was known by quite many people as well.

Explanations of your calculations are required.

C. The community

How well do you know your fellow kuskis?

4. Name the kuskis "K1" and "K2" responsible for the following chat lines. Some kuskis are included in more than one part.

(a) `<K1> I got international error`
`<K2> my too`

> **Solution:** henke8100 and Henry. Nobody got this fully correct, not even Zweq from whose Mopolauta signature this is. Both nicks were correctly guessed by someone, but sometiems in incorrect order.

(b) `<K1> i missed some 51, didnt even play`
`...`
`<K1> Kopaka: can you give me access to server pls?`
`<K1> i want check how it looks`
`<Kopaka> nah`
`<K1> Markku- has`
`<K1> hes more trusted than me?`

> **Solution:** Bjenn

(c) `<K1> i think pipes are nothing but sexual lust of litel horny kuskis expressing their penetrative desires in form of symbolic levmaking :>`

> **Solution:** BarTek
> Only Abula and terb0 knew.

(d) `<K1> http://vk.mine.nu/vkprivupload/`
`epzrbezk/15005937.rec`
`<K1> sorry`
`<K1> ara`
`<K1> dfasd`
`<K1> fa`
`<K1> fdas`
`<K1> f`
`<K1> d`
`<K1> shit`
`<K1> please do not dl that`

Bonus: what did the rec contain?

> **Solution:** Juzam
> Zweq's Serpents Tale WR rec

(e) `<YEAHS> saccharin sweet or aspartame sweet?`
`<K1> i dont speak dinosaur yeahs, ok>?`
`...`
`<K1> u merge slowness with finish count and u get black hole`

> **Solution:** Pab
> Only Lousku knew. In afterbattle both jonsykkel and jblaze knew.

(f) `<K1> i bet the whole australia's internet is connected to the other world with some guy transferring`

1.44MB diskettes on a rowing boat
between usa and australia

> **Solution:** Tisk.

(g) `<K1> fuck i hate it when someone beats`
`my first try and i have to play`

> **Solution:** Madness.

(h) `<Pawq> dif. start, i went over the`
`topright block`
`<K1> dont ever go over blocks man`
`...`
`<juka> i beat many pros`
`<K1> where`
`<juka> in batl`
`<K1> can u list pros u beated`
`<juka) all behind me`
`<K1> be aware of mans behind u in`
`armys shower`
`...`
`<K1> anyone wanna bet how many dead`
`tonite poland vs russia vs police`

> **Solution:** TL
>
> Only Zweq and Lousku knew, and
> jblaze in the afterbattle.

(i) `<K1> i got an idea`
`<K1> new spice`
`<K1> burned`
`<K1> imo it's a very good taste`
`<K1> tastes like grilled food`
`<K1> just little burned`
`<K1> but not burned`
`<K1> lol i could make millions with`
`this idea`

> **Solution:** Koopa

(j) `<K1> 29. Bjenn [EF] 01:32,71`
`<K1> 28. elmaster [TAP] 01:09,01`

> **Solution:** KOPASITE or Kopaka

(k) `<K1> someone has to teach you amateurs`
`how to play`

`<K1> i made my time effortlessly,`
`could've easily done better`
`<K1> it was just a display of power`
`<K1> stating i am the best and noone`
`here is near me`

> **Solution:** jaytea

(l) `<K1> 29.07`
`<K1> get on my level`
`<K1> bitch fag`
`<K1> played like 6 mins`
`<K2> haha 6 mins? let's verify it on`
`the site`
`<K2> it was actually 8 mins 56 seconds`

> **Solution:** Bjenn
> Madness

(m) `<K1> if i wased to be a robot i would`
`want my firmware to be by ville j`
`<K1> bcz i love not working`

> **Solution:** jonharkulsykkel

(n) `<K1> my phones battery has been made`
`in china`
`<K1> i'm very scared`
`...`
`<K1> if see people coughign it's a`
`good idea to avoid digging nose after`
`that`
`...`
`<K1> this level is like diving to a sea`
`...`
`<K1> what is the newest thing in`
`computers?`
`<K1> i haven't seen anything new after`
`chrome browser`

> **Solution:** Koopa

(o) `<K1> warm up is just for warming up`
`<K1> all spend too long here`
`...`
`<K1> you can tell a tree2's age by how`
`many`
`<K1> years it has lived`
`...`
`<K1> bjorn internalist battler GAA`

(p) `<ville_j> gaddame im hafing some kind`
`of flu, hopefully it nat get worse`
`<veezay-> must bee teh immense coldness`
`<ville_j> yes`
`<ville_j> must not slepa doors and`
`windows open anymore`
`<K1> your body was liek immense`
`coldness -> commence illness`

(q) `<K1> i go shower)`
`<K1> i smell like poland xD)`
`...`
`<K1> i go read elma physics book by`
`juha matti zamppersson`

(r) `<K1> fuck you vender, and your abusive`
`father`
`<K1> where is raven??`
`<K1> vender tell me where raven is or`
`i'll sic your father on you`
`<K1> do you ever fear the nights he`
`comes home drunk and horny`
`<K1> he calls your name and you curl`
`up in the corner of the room, knowing`
`what's about to happen`
`<K1> he stumbles up the stairs and`
`enters your room`
`<K1> you smell the alcohol on his`
`breath from the corner and weep`
`silently`
`<K1> yeah ok`

(s) `<K1> mIIIIIRA!`
`<K1> oH BEATY YEAH bbbbaabbbie!`
`<K1> TOP4 :dddddddddddddD`
`<K1> blaz!!`
`<K1> HE DID .90`

`<K1> .97 NEXT TRY!`
`<K1> BLAZZZ! not ZZZZZleeping here. oh`
`no!`
`<K1> wide awake. killING IT!!!!!!!`
`<K1> mira OH NO!`
`<K1> ONE WRONG VOLT`
`<K1> looked 34 FUCKIT!`

(t) `<K1> could = ?`
`<K1> updated = ?`
`<K1> roots = ?`
`<K1> believe = ?`
`<K1> quite = ?:(`
`<K1> dont do = ?`
`<K1> dont = ?`
`<K1> leave = ?`
`<K1> annoys = ?`
`<K1> luola = ?:)`
`<K1> cave = ?`
`<K1> though = ?`
`<K1> se vitun kukka = ?:))`
`<K1> quite = ?`
`<K1> same = ?`
`<K1> before eat = ?:D`
`<K1> state = ?`
`<K1> gap = ?:)`
`<K1> bull = ?:)`
`<K1> red bull = ?`
`<K1> nao = ?`
`<K1> aki = ?:(`
`<K1> viiru ja pesonen = ?:))`
`<K1> hair = ?`
`<K1> mopo = ?:)`
`<K1> Lim(hoyl)=?`
`<K1> x,y=?`
`<K1> y=cos(x) y\'\'=?`
`<K1> x-(x^2)+2=0 x=? x^x^32/x=? :D`
`<K1> torture = ?`
`<K1> solve = ?`
`<K1> skints = ?`
`<K1> jlg = ?`
`<K1> voodoo = ?:)`
`<K1> scary -= ?`
`<K1> all top10 = ?`
`<K1> moldova = ?:))`
`<K1> moldova word = ???`

(u) `<K1> ok but with faith healing there`
`is one important thing to remember:`

you need to have faith and if it
doesnt work its entirely your own fault

> **Solution:** Jappe2

(v) `<K1> who can move vertex without`
`saying dinosaur`
`...`
`<K1> 2nd pipe harder than climb`
`everest when 3 year old`

> **Solution:** talli
>
> Only Lousku knew this.

(w) `<Jeppe> anyone know where romy is?`
`<K1> dunno but romy version 4 is in`
`russia`

> **Solution:** jonharkulsykkel
>
> Nobody knew this, not even jon himself in afterbattle =)

(x) `<K1> i'm suar you'll come up with all`
`teh sensible ideas so i'm give you`
`thise beter ones`

> **Solution:** veezay

(y) `<zamppe> gues i pak monitor and start`
`boring drive`
`<K1> remember is one life driev`

> **Solution:** Stini
>
> This was a recent quote just before FEM and only Stini himself and Smibu got it.

(z) `<K1> i guess people are rating with`
`different ways`
`<K1> do you compare songs to other`
`songs?`
`<K1> when rating do you compare it to`
`your best song?`
`<K1> so thinking like "i can't give 8`
`because i know a lot better song"`
`<K1> i'm trying to think songs like`
`for example fruits`
`<K1> they are all perfect like they are`

> **Solution:** Koopa
>
> Only adi, insane guy and Lousku got this one.
>
> Markku got in total $10\frac{1}{2}$, Lousku $9\frac{3}{4}$ and Orcc $8\frac{1}{4}$ points from here.

½ points per kuski

5. Correct the spelling of the nicknames below. Examples: tor inge → TorInge, tatjuka → tatujka, magyr yz → magyar xy, Kopaka → Koopa.

(a) sigvseb

> **Solution:** sigveseb

(b) the o

> **Solution:** The_OooO

(c) witalo 123

> **Solution:** Witalo190
>
> Only jonsykkel in the afterbattle got this right.

(d) beat

> **Solution:** bEAT

(e) champion

> **Solution:** Champi0N

(f) ylenspighel

> **Solution:** ylenshpigel

(g) jon has a nice bicycle

(h) вы все суки

¹/₂ points per nickname

D.   Graphics of internals

"Did you think you know what internals look like?" part II.

6. Recognize from which internals the polygons in Fig. 1 are from!
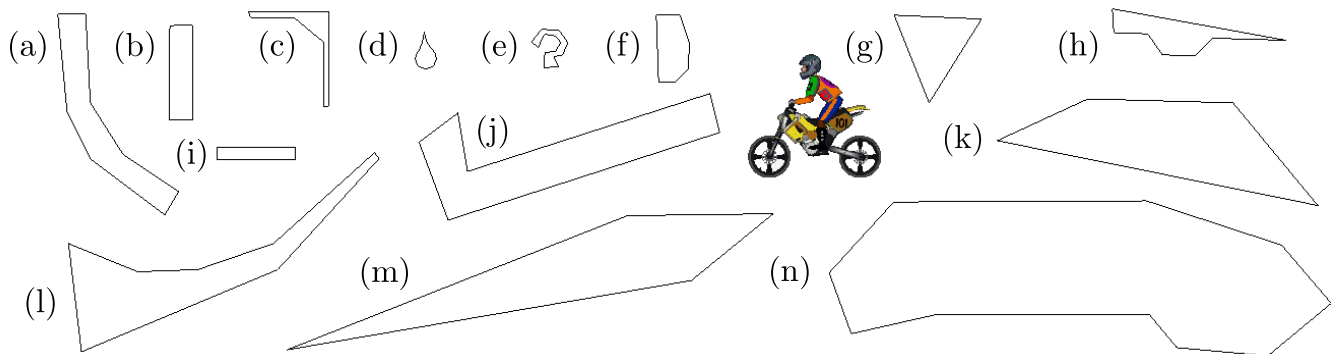
1 point per polygon

Figure 1: Polygons of internal levels. They can be either inner or outer polygons. Kuski is for scale. Some level(s) might be included more than once.

Solution:

  (a) 32: Steep Corner – Only Tisk and FinMan got this, which was very surprising. Also jon and jblaze got this in afterbattle.

  (b) 14: Loop-de-loop

  (c) 45: Sink

  (d) 31: Animal Farm

  (e) 46: Bowling

(f) 48: Downhill – Only Ramone got this one, and jblaze in the afterbattle

(g) 09: Tunnel Terror

(h) 12: Islands in the Sky

(i) 34: Bumpy Journey

(j) 18: Spiral

(k) 46: Bowling. Only Markku and FinMan knew this.

(l) 27: Shelf Life

(m) 41: Framework – Nobody got this except jblaze in the afterbattle.

(n) 04: Over and Under

Ramone got 10/14 here with a 5min effort to the whole quiz, FinMan with 9 was 2nd. Zweq and Markku 7 points. But the best result was 11 by jblaze in the afterbattle!

E. The final results

Table 1: The official results at FEM2017.

#	Kuski	Points
1.	Markku	29 $^1/_2$
2.	FinMan	27 $^1/_2$
3.	Zweq	25 $^1/_2$
4.	Orcc	21 $^1/_4$
5.	Lousku	20 $^1/_2$
6.	Igge	20
7.	Stini	19 $^1/_4$
8.	Tisk	17 $^3/_4$
9.	Abula	17 $^1/_2$
10.	adi	16
11.	Smibu	15 $^3/_4$
12.	Kopaka	15 $^1/_4$
13.	Ramone	14
14.	Zero	12 $^1/_2$
15.	ville_j	12
16.	Kortsu	11 $^1/_2$
17.	Pawq	10 $^1/_2$
18.	zebra	10 $^1/_4$
19.	8-ball	9 $^1/_4$
20.	Ismo	7
	Nekit & Ramses	7
22.	terb0	6 $^1/_2$
23.	Ruben	6
	HaraldH	6
25.	insguy	5 $^1/_2$
26.	Polarix	3 $^3/_4$
27.	ILKKA	$^3/_4$

Table 2: Unofficial afterbattle results.

#	Kuski	Points
1.	jblaze	29 $^1/_2$
2.	jonsykkel	23