Exercise 1: (1.5 ptos)

  a) There are 1216 million people living in Africa, but only 7% of them have been vaccinated so far. How many people are still waiting to be vaccinated?   **1130 880 000 people**

  b) Due to the new coronavirus variants, as of 1st August 2021 Pfizer increased the price of a dose of their vaccine by 25%, so that the actual price is of 19.5€. What was the price before?   **15.6€**

Exercise 2: (1.75 ptos) Fill in the gaps in these tables and find the value of the constant of proportion, knowing that they are:

  a) Directly proportional

36	72	63	108	27	10.8	
4	8	7	12	3	1.2	$k = 9$

  b) Inversely proportional

8	32	1	16	2.7	128	
8	2	64	4	23.7	0.5	$k = 64$

Exercise 3: (1.25 ptos) **Classify** the following decimal numbers and the turn them into fractions:

  a) $5.3\overline{274} = \{\text{mixed repeating}\} = \dfrac{53221}{9990}$

  b) $\phi = $ Irrational, you can't

  c) $0.33333 = \{\text{terminating}\} = \dfrac{33333}{100000}$

  d) $2.\overline{439} = \{\text{pure repeating}\} = \dfrac{2437}{999}$

Exercise 4: (1.5 ptos) Write the following numbers using scientific notation:

  a) The radius of the SARS-CoV-2, $0.000 000 062 5$ m $\rightarrow$ $6.25 \cdot 10^{-8}$ m

  b) The radius of the Milky Way, $499 961 000 000 000 000 000$ m $\rightarrow$ $5 \cdot 10^{20}$ m

  c) $19542.437 \cdot 10^{-9} = 1.95 \cdot 10^{-5}$

  d) $0.000053278 \cdot 10^{-3} = 5.33 \cdot 10^{-8}$

Exercise 5: (1 pto) Divide $1260€$ in a directly proportional way to $3, 5$ and 7

  $x = 252€$ $y = 420€$ $z = 588€$

Exercise 6: (1 pto) I've been wanting for a long time to buy me a present, jeez I deserve it, so this Black Friday I decided that I had waited long enough. The original price was of $39.9€$, but now it had a discount of 15%, and then I got another $3€$ discount because I was paying with a certain credit card. How much am I paying in the end? Çok mutluyum ben.   **I'm paying 30.92€**

Exercise 7: (2 ptos)

  a) Six people need two hours and a half to plant a bunch of trees. How long would eight people need? Express the answer using hours, minutes and seconds   **1h 52' 30"**

  b) 750 grams of Christmas sweets have a price of $2.95€$. What would be the price of two kilos and a half?   **9.83€**