Show your work for full marks! Remember that you can check all of your answers!

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1) For the following two-step equations, complete the table **fully**. ➄ each.

a)

|  |  |
| --- | --- |
| Equation: $$5x-4=56$$ | What is it asking? |
| Solution: | Am I right? |

Question 2:

|  |  |
| --- | --- |
| Equation: $$5x+7=2$$ | What is it asking? |
| Solution: | Am I right? |

2) Solve any six of the following two-step equations. Solve all of them if you have time. You can rearrange first if you’d like. You do not need to show Mr. Smith a check to your answer. ➂ each

a) $7+3x=40$ b) $13=5x-17$ c) $5=13-2x$

d) $-2x+5=15$ e) $-4+5x=1$ f) $-11=7-6x$

g) $4.9x+5.1=49.2$ h) $-7-5x=-2$ i) $77=7+7x$

3) Mr. Smith is currently at level 10 on his Clash Royale account. This means his King tower has 4392 hit points. His opponent has played a level 8 giant, that does 154 points of damage every second.

An equation that would model the health of Mr. Smith’s King tower is…

$$H=4392-154t$$

Where *H* is the amount of hit points his tower has, and *t* is the number of seconds that the giant attacks for.

a) If the giant attacks for 7.5 seconds, how many hit points will Mr. Smith’s King tower have left? ➀

b) In another game, a similar giant got Mr. Smith’s King tower down to 3853 hit points. How many seconds did the giant attack for? ➁

c) If left uncontested, how many seconds would it take the giant to destroy Mr. Smith’s King tower (reduce its hit points to 0)? ➁

d) When Mr. Smith hits level 11, his King tower will have 4824 hit points. His opponent now has a level 10 giant that does 186 damage every second. If left uncontested, how many seconds would it take the giant to destroy Mr. Smith’s King tower (reduce its hit points to 0)? ➂

BONUS: The bags of candy on the balanced scale given contain the same amounts. If you neglect the mass of the bags, how many candies are in each bag? You do not need to set up an equation to solve this problem, just explain your reasoning.

