Unit 4 Study Guide Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| 1) Solve:$$23=\frac{x}{5}$$ | 2) Solve:$$7m+11=60$$ | 3) Solve:$$35=15-4n$$ | 4) Solve:$$\frac{-x}{2}=13$$ |
| 5) Solve:$$\frac{x-5}{10}=-3$$ | 6) Solve:$$\frac{2}{3}x-4=2$$ | 7) Copper burned 720 calories today when running. This was 65 calories more than he burned yesterday. How many calories did Copper burn yesterday? | 8) Sam is $\frac{1}{5}$ his dad’s age. If Sam is 7 years old, how old is his dad? |
| 9) Trey needs to write a total of 500 words for an English essay. He currently has $\frac{1}{4}$ of the total paper done. How many more words does Trey need to write to be finished with his essay? | 10) Which values for x make the following true?$$-6>-4+x$$$$A) x>-10$$$$B) x<-10$$$$C) x>-2$$$$D) x<-2$$ | 11) Which represents all the values for x that make the following true?$$-6x\geq 60$$$$A) x\geq -10$$$$B) x\leq -10$$$$C) x\geq 66$$$$D) x\leq 66$$ | 12) What is a value of x that makes the following true?$$-4x<28$$$$A)-6$$$$B)-7$$$$C)-8$$$$D)-9$$ |

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| 13) Look at the equation shown in the model: Which model shows the next step in solving the equation?   | 14) Using the key shown, identify each model where x has a value of 2.   | 15)  |
| 16)$$A) 12<x+7 B)-12>x-7$$$$C) 12>x+7 D)-12<x-7$$ | 17) | 18) Select all the possible solutions for the inequality below?$$8+x<-2$$$$10 -9 -12 0 -4$$$$-10 -17 -21 -7 12 $$$$-13 -39 -8 -2 15 $$ |