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UNIT 6 LESSON 5

**AIM**: SWBAT determine the amount after the change of a percent increase or decrease

**THINK ABOUT IT!**

Chris and Will both were accepted into the athletic department at UPenn. Both start the year at the same weight of 200 pounds but end up participating in different sports. Chris played football and gained 25% of his original weight in muscle by the end of the season. Will ran track and lost 25% of his original weight by the end of the season. How much did each person weigh at the end of the season?

Test the Conjecture #1) 250 was decreased by 30%. What is the amount after the change?

Test the Conjecture #2) The 6th grade class at Elm City College Prep increased by 5% this year. If there were 80 scholars in 6th grade last year, how many are there this year?

Conjecture

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**PARTNER PRACTICE**

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| *Bachelor Level* |

1. What is 50 increased by 40%?
2. In 2015, there were 310 rats that were counted living in a park outside of New Haven, CT. The town laid out traps to exterminate the rats and the population decreased by 70%. How many rats can be anticipated in the park now?

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| *Master Level* |

1. 39 is increased by 78%. Read each statement below and determine whether it’s “true” or “false.”

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| --- | --- | --- |
| Statement | True | False |
| The resulting value will be more than 39 |  |  |
| To find 39 increased by 78%, you multiply 0.78 by 39 |  |  |
| To find 39 increased by 78%, you multiply 0.78 by 39 and add that value to 29 |  |  |
| 39 increased by 78% is 28.08 |  |  |
| 39 increased by 78% is 69.42 |  |  |

**INDEPENDENT PRACTICE**

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| *Bachelor Level* |

1. 88 is increased by 25%. What is the new value?
2. What is 400 decreased by 0.5%?
3. 5 is increased by 200%. What is new value?

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| *Master Level* |

1. The population of flamingos at the Bronx Zoo is 48. One spring, they have lots of babies and the population increases by 12.5%. Which statements below are true? Circle all of the answers below that apply.

a) There are 12.5 more flamingos now at the Bronx Zoo

b) There are fewer flamingos now at the Bronx Zoo

c) To find the number of flamingos at the Bronx Zoo, multiply 48 by 12.5 and add that value to 48.

d) To find the number of flamingos at the Bronx Zoo, multiply 48 by .125 and subtract that from 48

e) There are 6 flamingos now at the Bronx Zoo

f) 6 flamingos were born in the spring

g) There are now 54 flamingos at the Bronx Zoo

1. After the Mount St. Helens volcano erupted in 1980, the elevation of the mountain decreased by about 13.6%. Its elevation had been 9677 ft. What was its elevation after eruption?
2. The local movie theater wants to increase ticket prices by 37% to keep up with rising costs. The current price of a ticket is $8. What will the new ticket price be after the 37% increase (to the nearest cent)?

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| *PhD Level* |

1. Danielle is trying to determine the amount after a 25% decrease. She says that the only way to do this is to find 25% of the whole and then subtract it from the whole. Gabby says that she could also just find 75% of the whole. Who do you agree with and why? Use a double number line to prove your claim. Write as many expressions as you can to find the amount after a 25% decrease for any number.

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**EXIT TICKET**

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| Self-assessment | I mastered the learning objective today. | I am almost there. | Need more practice and feedback. |
| Teacher feedback | You mastered the learning objective today. | You are almost there. | You need more practice and feedback. |

1. The value of an investment decreased by 10%. The original amount was $75.00. What is the current value of the investment?
2. The weight of a dolphin increased by 17% when it became pregnant. What is the approximate pregnant weight of the dolphin if it was 278 lbs. before it became pregnant? Round to the nearest tenth of a pound.