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**Homework 9-3**  
**Probability of Multiple Events**  
**“With” or “Without” Replacement**

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**Review:**

Solve each inequality.

1.  $x + 2 > 7$

3.  $10 > n - 2$

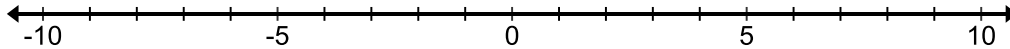
5.  $\frac{-x}{3} > 6$

2.  $m - 13 \leq 7$

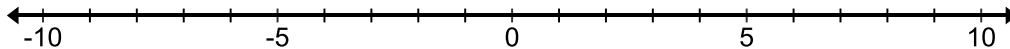
4.  $-36 \geq -4y$

Graph each inequality and name 3 possible solutions for  $x$ .

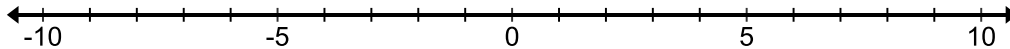
6.  $x < 3$



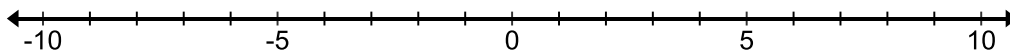
7.  $x \geq -7$



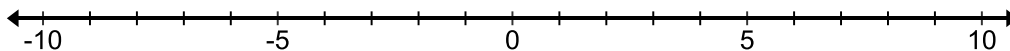
8.  $x > 5$



9.  $x < 1$



10.  $x \geq -10$



Doug flipped a penny the given number of times. What is the probability of the following? (Give the answer as a simplified fraction.)

11. P(head, tail)

13. P(tail, tail, head)

12. P(head, head)

14. P(head, head, head, head)

**The Save Mart's movie area has 6 actions, 4 comedies, 1 documentary. Two customers each choose a movie at random. Assuming the first customer buys a movie, what is the probability that the following situation occurs? (Give answer as a reduced fraction.)**

15. Both choose action.

16. Both choose comedy.

17. The 1<sup>st</sup> customer chooses a documentary, the 2<sup>nd</sup> chooses a comedy.

18. Both choose a documentary.

**The first customer randomly chooses a movie, but then puts it back. Then the second customer randomly chooses a movie. What is the probability that the customers choose the following? (Give the answer as a simplified fraction.)**

19. Both choose action.

21. Both choose the documentary.

20. The 1<sup>st</sup> chooses the documentary, 2<sup>nd</sup> chooses action.

22. Both choose a comedy.

**We are choosing blocks from a bag. There are 6 red, 4 green, 2 blue, 2 white, and 1 black. You choose the first, look at the color, and then put it back. You then choose a second block. What is the probability that you choose the following? (Give the answer as a simplified fraction.)**

23. P(blue, white)

25. P(red, blue)

24. P(green, black)

26. P(white, green)

**If you keep the 1<sup>st</sup> block, and then choose a 2<sup>nd</sup> block, what is the probability that you choose the following? (Give the answer as a simplified fraction.)**

27. P(blue, white)

29. P(red, black)

28. P(black, green)

30. P(black, black)