

Name: \_\_\_\_\_

Show work needed to justify your answer.

Date: \_\_\_\_\_

HW: # 32c: Math IBSL - Standard 30 - Venn Diagrams and Sample Spaces

5 points

- 2 Two tetrahedral dice, one blue and the other red, are each numbered 1 to 4. The two dice are rolled and the results noted.
- a Draw a sample space diagram for this experiment.
  - b Find the probability that:
    - i the number on the red dice is greater than the number on the blue dice
    - ii the difference between the numbers of the dice is 1
    - iii the red dice shows an odd number and the blue dice shows an even number
    - iv the sum of the numbers on the dice is a prime number.

- 3 A box contains three cards bearing the numbers 1, 2, 3. A second box contains four cards with the numbers 2, 3, 4, 5. A card is chosen at random from each box.
- a Draw the sample space diagram for the experiment.
  - b Find the probability that:
    - i the cards have the same number.
    - ii the larger of the two numbers drawn is a 3
    - iii the sum of the two numbers on the card is less than 7
    - iv the product of the numbers on the card is at least 8
    - v at least one even number is chosen.