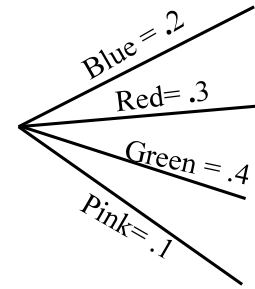


### Probability Trees

The probability of landing on a specific color on a spinner is listed on the probability tree. Calculate each probability as a decimal and a percentage.

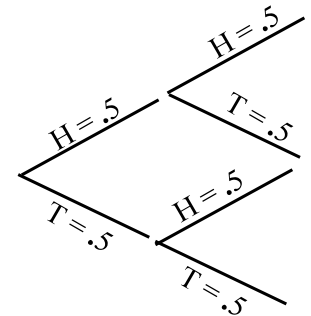
- |  |                           |   |
|--|---------------------------|---|
| 1) $P(G) =$  | 2) $P(R) =$               | 3) $P(B) =$                             |
| 4) $P(B \text{ or } R) =$                              | 5) $P(R \text{ or } G) =$ | 6) $P(B \text{ or } R \text{ or } G) =$ |
| 7) $P(G \text{ or } P) =$                              | 8) $P(B \text{ or } P) =$ | 9) $P(P) =$                             |
| 10) $P(B \text{ or } R \text{ or } G \text{ or } P) =$ | 11) $\#5 + \#8 =$         | 12) $1 - \#6 =$                         |



Madison flips a coin twice. The probabilities for each flip are listed on the tree. Calculate each probability as a decimal and a percentage.

- |                                  |  |   |
|----------------------------------|--|---|
| 13) $P(\text{1st flip heads}) =$ | 14) $P(\text{1st flip tails}) =$                           | 15) $P(HH \text{ or } HT \text{ or } TH) =$ |
| 16) $P(HH) =$                    | 17) $P(TH) =$  | 18) $P(TT) =$                               |
| 19) $P(HT) =$                    | 20) $P(TH \text{ or } TT) =$                               | 21) $\#15 + \#18 =$                         |
| 22) $P(HH \text{ or } HT) =$     | 23) $P(HH \text{ or } HT \text{ or } TH \text{ or } TT) =$ | 24) $1 - P(HH \text{ or } HT) =$            |

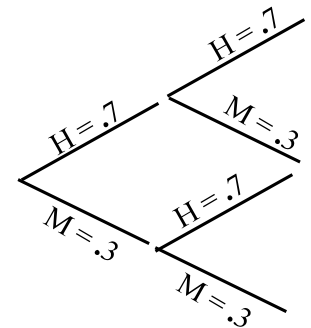
H = heads, T = tails



Randy is a 70% free throw shooter. He is shooting two free throws. Calculate each probability as a decimal and a percentage.

- |                                  |  |                                  |
|----------------------------------|--|----------------------------------|
| 25) $P(\text{hits 1st shot}) =$  | 26) $P(\text{misses 1st shot}) =$                          | 27) $P(HH \text{ or } MM) =$     |
| 28) $P(MH) =$                    | 29) $P(HM) =$  | 30) $1 - P(HH \text{ or } MM) =$ |
| 31) $P(MM) =$                    | 32) $P(HH \text{ or } HM) =$                               | 33) $\#15 + \#18 =$              |
| 34) $1 - P(MH \text{ or } MM) =$ | 35) $P(HH \text{ or } HM \text{ or } MH \text{ or } MM) =$ | 36) $1 - P(HH \text{ or } HT) =$ |

H = hit, M = miss



Paul rolls an odd-shaped, 4 sided die and then flips a coin. Calculate the probability of each outcome as a decimal and a percentage.

- |  |                                |   |
|--|--------------------------------|---|
| 37) $P(1 \text{ or } 2)$                               | 38) $P(1H)$                    | 39) $P(1H) =$<br>$+ P(1T) =$<br>$+ P(2H) =$<br>$+ P(2T) =$<br>$+ P(3H) =$<br>$+ P(3T) =$<br>$+ P(4H) =$<br>$+ P(4T) =$<br>$=$ |
| 40) $P(3 \text{ or } 4)$                               | 41) $P(1T)$                    |   |
| 42) $1 - P(1 \text{ or } 2)$                           | 43) $P(1H \text{ or } 1T)$     |   |
| 44) How do 40 and 43 compare? Why                      | 45) $1 - P(1H \text{ or } 1T)$ |   |
| 46) $P(1 \text{ or } 2 \text{ or } 3 \text{ or } 4) =$ | 47) $P(2H \text{ or } 3H)$     |   |
|  | 48) $1 - P(2H \text{ or } 3H)$ |   |

Key:

$P(1) = .34$

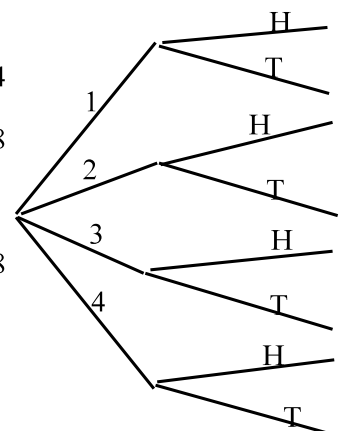
$P(2) = .08$

$P(3) = .2$

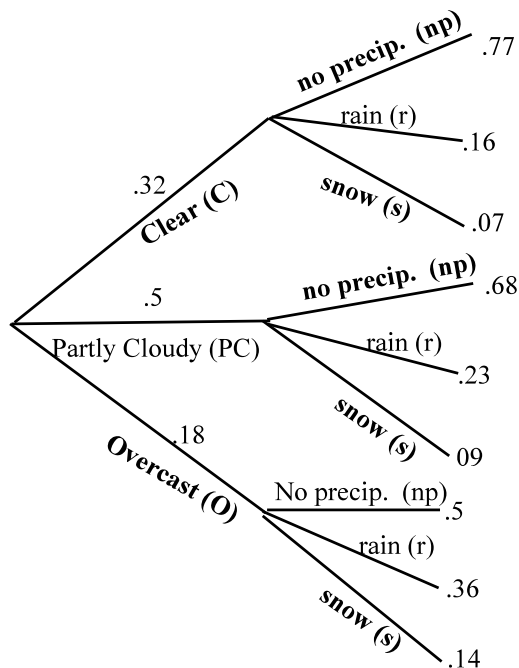
$P(4) = .38$

$P(H) = .5$

$P(T) = .5$



The first branch of the probability tree below gives the probability that a day will begin clear, partly cloudy, or overcast in Weather City. The second branch gives the probabilities of different precipitation outcomes.



Give the following probabilities.

49)  $P(C) =$                       50)  $P(PC) =$                       51)  $P(O \text{ or } PC) =$

52)  $P(C \text{ or } PC) =$                       53)  $P(C \text{ or } O) =$

54)  $P(O \text{ and } r) =$                       55)  $P(PC \text{ and } r) =$

56)  $P(C \text{ and } s) =$                       57)  $P(C \text{ and } np) =$

58)  $P(PC \text{ and } np) =$                       59)  $P(O \text{ and } np) =$

60)  $P(C \text{ or } PC \text{ or } O) =$                       61)  $P(O \text{ and } np \text{ OR } O \text{ and } r) =$

62)  $P(C \text{ and } r \text{ OR } C \text{ and } s) =$

63)  $P(PC \text{ and } np \text{ OR } PC \text{ and } r) =$

64)  $P(C \text{ and } s \text{ OR } PC \text{ and } np) =$

65)  $P(PC \text{ and } r \text{ OR } C \text{ and } r) =$

66)  $P(C \text{ and } np \text{ OR } PC \text{ and } np \text{ OR } O \text{ and } np) =$

67)  $P(C \text{ and } np \text{ OR } C \text{ and } r \text{ OR } C \text{ and } s) =$

68)  $P(C \text{ and } s \text{ OR } PC \text{ and } s \text{ OR } O \text{ and } s) =$

69)  $P(O \text{ and } np \text{ OR } O \text{ and } r \text{ OR } O \text{ and } s) =$

70)  $P(C \text{ and } np \text{ OR } C \text{ and } r \text{ OR } C \text{ and } s \text{ OR } PC \text{ and } np \text{ OR } PC \text{ and } r \text{ OR } PC \text{ and } s \text{ OR } O \text{ and } np \text{ OR } O \text{ and } r \text{ OR } O \text{ and } s) =$