

Name _____

Date _____



RATIO & PROBABILITY PROBLEMS 7:2

Write your ratio answers in the form ____ : ____.

Write your probability answers as a fraction.

In a managed forest, three different saplings are planted. The trees are beech, holly and maple. For every beech tree planted, there are 2 holly trees planted and 5 maple trees planted.

- 1) Write down the ratio of trees. ____ beech : ____ holly : ____ maple trees
- 2) If 6 beech trees were planted, how many holly trees would be planted? ____
- 3) If 40 maple trees were planted, how many beech trees would be planted? ____
- 4) What is the probability that a tree chosen at random:
 - a) would be a beech? ____
 - b) would be a maple? ____
 - c) would be a holly? ____
 - d) would not be a beech? ____

Due to a rise in the demand for beech, the ratios of trees planted change to 3 beech : 2 holly : 5 maple.

- 5) If 36 beech trees were planted, how many maple trees would be planted? ____
- 6) If 80 trees were planted altogether, how many trees would be:
 - a) beech = ____ trees
 - b) holly = ____ trees
 - c) maple = ____ trees
- 7) What is the probability that a tree chosen at random:
 - a) would be maple? ____
 - b) would not be holly? ____
 - c) would not be beech or maple? ____
 - d) would be a holly or beech? ____

The saplings have a probability of 70% of surviving to become adult trees.

- 8) If 80 trees are planted, about how many will become adult trees? _____





RATIO & PROBABILITY PROBLEMS 7:2 ANSWERS

In a managed forest, three different trees are planted. The trees are beech, holly and maple. For every beech tree planted, there are 2 holly trees planted and 5 maple trees planted.

- 1) Write down the ratio of trees. **1 beech : 2 holly : 5 maple trees**
- 2) If 6 beech trees were planted, how many holly trees would be planted? **12**
- 3) If 40 maple trees were planted, how many beech trees would be planted? **8**
- 4) What is the probability that a tree chosen at random:
 - a) would be a beech? **$\frac{1}{8}$**
 - b) would be a maple? **$\frac{5}{8}$**
 - c) would be a holly? **$\frac{2}{8}$ or $\frac{1}{4}$**
 - d) would not be a beech? **$\frac{7}{8}$**

Due to a rise in the demand for beech, the ratios of trees planted changes to 3 beech : 2 holly : 5 maple.

- 5) If 36 beech trees were planted, how many maple trees would be planted? **60**
- 6) If 80 trees were planted altogether, how many trees would be:
 - a) beech = **24** trees
 - b) holly = **16** trees
 - c) maple = **40** trees
- 7) What is the probability that a tree chosen at random:
 - a) would be maple? **$\frac{5}{10}$ or $\frac{1}{2}$**
 - b) would not be holly? **$\frac{8}{10}$ or $\frac{4}{5}$**
 - c) would not be beech? **$\frac{7}{10}$**
 - d) would be a holly or beech? **$\frac{5}{10}$ or $\frac{1}{2}$**

The saplings have a probability of 70% of surviving to become adult trees.

- 8) If 80 trees are planted, about how many will become adult trees? **70% of 80 = (10% of 80) x 7 = 8 x 7 = 56.**

So 56 of the 80 trees will become adult trees.

