Iditarod Math Problem Solving
created by Nancy Wendt, Eau Claire, WI
(updated October 18, 2021)

*There are 54 teams entered in the 2022 Iditarod. Each team is allowed to start with a maximum of 14 dogs. Using that number for all teams, how many dogs will be in the Iditarod?

*How many total paws would that be?

*The musher is required to carry 2 sets of booties for each dog on his/her team. What is the minimum number of booties each musher must carry for a team of 14 dogs?

 *What would be the total minimum number of booties needed for all teams in the 2022 Iditarod?

 *Most mushers change booties every 25 miles. Using an approximate distance of 1,000 miles for the whole race, how many times will a musher change booties?

*Based on that number of changes, how many booties would a musher with 14 dogs need to have for the whole Iditarod trip?

*The average dog bootie costs about $1.70. How much will a musher spend for his/her booties for the whole Iditarod trip?

*How many of the 54 mushers are veterans? How many are rookies?

*What fraction of the total 54 mushers are veterans? What fraction are rookies?

*At the Iditarod re-start each team leaves at 2 minute intervals. With 54 teams starting, how long will the re-start take?

*The re-start begins at 2:00 p.m. Alaska Standard Time. At what approximate time will it end?

*What time would that be in the time zone in which you live?

Iditarod Math Problem Solving - Answer Key
created by Nancy Wendt, Eau Claire, WI

*There are 54 teams entered in the 2022 Iditarod. Each team is allowed to start with a maximum of 14 dogs. Using that number for all teams, how many dogs will be in the Iditarod?

54 x 14 = 756 dogs

*How many total paws would that be?

756 x 4 paws each dog = 3,024 paws

*The musher is required to carry 2 sets of booties for each dog on his/her team. What is the minimum number of booties each musher must carry on a team of 14 dogs?

(14 x 4 paws) x 2 sets = 56 x 2 = 112 booties

 *What would be the total minimum number of booties needed for all teams to carry in the 2022 Iditarod?

112 booties x 54 teams = 6,048 booties

 *Most mushers change booties every 25 miles. Using an approximate distance of 1,000 miles for the whole race, how many times will a musher change booties?

1,000 ÷ 25 miles = 40 times

*Based on that number of changes, how many booties would a musher with 14 dogs need to have for the whole Iditarod trip?

40 changes x 56 booties = 2,240 booties

(since mushers will not always change every 25 miles or have all 14 dogs throughout entire race, most mushers plan for about 2,000 booties - use that figure for next problem)

*The average dog bootie costs about $1.70. How much will a musher spend for his/her booties for the whole Iditarod trip?
2,000 booties x $1.70 each = $3,400.00

*How many of the 54 mushers are veterans? How many are rookies?
Veterans: 41 Rookies: 13

*What fraction of the total 54 mushers are veterans? What fraction are rookies?
Veterans: 41/54   Rookies: 13/54

*At the Iditarod re-start each team leaves at 2 minute intervals. With 54 teams starting, how long will the re-start take?
54 teams x 2 min. = 108 minutes = 1 hour and 48 minutes

*The re-start begins at 2:00 p.m. Alaska Standard Time. At what approximate time will it end?
2:00 p.m. + 1 hour 48 minutes = 3:48 p.m. Alaska Standard Time

*What time would that be in the time zone in which you live?
Pacific Standard Time: 4:48 p.m.
Mountain Standard Time: 5:48 p.m.
Central Standard Time: 6:48 p.m.
Eastern Standard Time: 7:48 p.m.