

Iditarod Math Problem Solving

created by Nancy Wendt, Eau Claire, WI

*There are 75 teams entered in the 2017 Iditarod. Each team is allowed to start with a maximum 16 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 16 dogs?

*What would be the total minimum number of booties needed for all teams in the 2017 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 16 dogs need to have for the whole Iditarod trip?

*The average dog bootie costs about \$1.20. How much will a musher spend for his/her booties for the whole Iditarod trip?

*How many of the 75 mushers are veterans? How many are rookies?

*What fraction of the total 75 mushers are veterans? What fraction are rookies?



*At the Iditarod re-start each team leaves at 2 minute intervals.
With 75 teams starting, about 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

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*There are 75 teams entered in the 2017 Iditarod. Each team is allowed to start with a maximum 16 dogs. Using that number for all teams, how many dogs will be in the Iditarod?

$$75 \times 16 = 1,200 \text{ dogs}$$



*How many total paws would that be?

$$1,200 \times 4 \text{ paws each dog} = 4,800 \text{ paws}$$

*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 16 dogs?

$$(16 \times 4 \text{ paws}) \times 2 \text{ sets} = 64 \times 2 = 128 \text{ booties}$$

*What would be the total minimum number of booties needed for all teams in the 2017 Iditarod?

$$128 \text{ booties} \times 75 \text{ teams} = 9,600 \text{ booties}$$



*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?

$$1,000 \div 25 \text{ miles} = 40 \text{ changes}$$

*Based on that number of changes, how many booties would a musher with 16 dogs need to have for the whole Iditarod trip?

$$40 \text{ changes} \times 64 \text{ booties} = 2,560 \text{ booties}$$

(since mushers will not always change every 25 miles or have all 16 dogs throughout entire race, most mushers plan for about 2,000 booties - use that figure for next problem)

*The average dog bootie costs about \$1.20. How much will a musher spend for his/her booties for the whole Iditarod trip?

$$2,000 \text{ booties} \times \$1.20 \text{ each} = \$2,400.00$$

*How many of the 75 mushers are veterans? How many are rookies?

Veterans: 58

Rookies: 17

*What fraction of the total 75 mushers are veterans? What fraction are rookies?

Veterans: $58/75$

Rookies: $17/75$



*At the Iditarod re-start each team leaves at 2 minute intervals.
With 75 teams starting, about how long will the re-start take?

75 teams x 2 min. = 150 minutes = 2 hours and 30 minutes
(2 1/2 hours)

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

2:00 p.m. + 2 hours 30 minutes = 4:30 p.m. Alaska Standard Time

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

Pacific Standard Time: 5:30 p.m.

Mountain Standard Time: 6:30 p.m.

Central Standard Time: 7:30 p.m.

Eastern Standard Time: 8:30 p.m.

