
MTH 101

Lecture 4

Rankings

Announcements

- Snapshot 4 -- over percent vs. percentage point change
- Lab 4 -- start your Writing Project
- Homework 5 due Monday at 10pm
- Don't forget to buy your homework!

Weighted Averages Rankings

BEST SLEEPING PADS

TOP PICK



Test Results and Ratings

Displaying 1 - 5 of 27

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Therm-a-Rest NeoAir Xtherm

[Read the Review](#)



REI Co-op Flash All-Season Insulated Air

[Read the Review](#)



Therm-a-Rest NeoAir XLite

[Read the Review](#)



Sea to Summit Comfort Plus Insulated

[Read the Review](#)

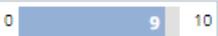
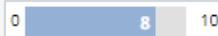
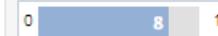
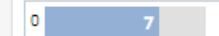
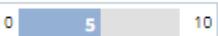
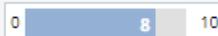
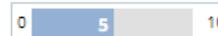
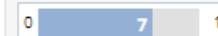
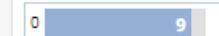


Therm-a-Rest NeoAir All Season SV

[Read the Review](#)

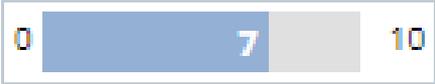
| | | | | | |
|------------------------|---|---|--|---|---|
| Awards |  |  |  |  | |
| Price | \$199.95 at REI Compare at 4 sellers | \$129.00 at REI | \$129.95 at REI Compare at 4 sellers | \$149.99 at Amazon Compare at 4 sellers | \$140.65 at Amazon Compare at 4 sellers |
| Overall Score ▾ |  |  |  |  |  |

How did they get these rankings ???

| Rating Categories | NeoAir Xtherm | Co-op Flash All-Season Insulated Air | NeoAir XLite | Comfort Plus Insulated | NeoAir All Season SV |
|------------------------------|--|--|---|--|--|
| Comfort (30%) | 0  10 | 0  10 | 0  10 | 0  10 | 0  10 |
| Weight And Packed Size (30%) | 0  10 | 0  10 | 0  10 | 0  10 | 0  10 |
| Warmth (20%) | 0  10 | 0  10 | 0  10 | 0  10 | 0  10 |
| Ease Of Inflation (10%) | 0  10 | 0  10 | 0  10 | 0  10 | 0  10 |
| Durability (10%) | 0  10 | 0  10 | 0  10 | 0  10 | 0  10 |
| Specs | NeoAir Xtherm | Co-op Flash All-Season Insulated Air | NeoAir XLite | Comfort Plus Insulated | NeoAir All Season SV |
| Type | Air Construction (Duffel) | Air Construction (Synthetic) | Air Construction (Duffel) | Air Construction (AirSeal) | Air Construction (Duffel) |

Weighted Average!!! -like calculating course grades

Each category for sleeping bag has a weight and is scored out of 10.

| Rating Categories | NeoAir Xtherm |
|------------------------------|--|
| Comfort (30%) |  |
| Weight And Packed Size (30%) |  |
| Warmth (20%) |  |
| Ease Of Inflation (10%) |  |
| Durability (10%) |  |
| Price | Neo Air Xtherm |

Score:

$70\% * 0.30 +$

$80\% * 0.30 +$

$90\% * 0.20 +$

$50\% * 0.10 +$

$70\% * 0.10 =$

75 matches the site's given score for the TOP sleeping bag



| Scores out of 10 | | |
|--|--------|--------|
| | Lamp 1 | Lamp 2 |
| Brightness (35%) | 9 | 9 |
| Effective width of light beam (20%) | 7 | 8 |
| Battery Life (15%) | 9 | 6 |
| Weight (15%) | 4 | 5 |
| Ease of Use (15%) | 9 | 6 |
| | | |

Calculate which of these two headlamps has higher score with the given ranking system.

What are some things not taken into consideration in this ranking system?

Madden Football

<https://fivethirtyeight.com/features/madden/>

Weights are given for traits for each position

The Formula Behind Madden's Overall Ratings

Weights given to traits for each position

OFFENSE

| | BACKS | | CATCHERS | | OFFENSIVE LINE | | | | |
|---------------------|-------|----|----------|----|--|-----|-----|-----|-----|
| | HB | FB | WR | TE | LT | LG | C | RG | RT |
| Pass block | | 9% | | 4% | 39% | 29% | 27% | 29% | 20% |
| Awareness | 13 | 18 | 12 | 12 | 17 | 18 | 20 | 18 | 20 |
| Run block | | 18 | | 12 | 19 | 18 | 27 | 18 | 33 |
| Strength | 2 | 3 | 2 | 6 | 11 | 12 | 10 | 12 | 10 |
| Impact block | | 12 | | 6 | 6 | 9 | 7 | 9 | 7 |
| Speed | 13 | 6 | 12 | 6 | 3 | 3 | 3 | 3 | 3 |
| Acceleration | 8 | 6 | 8 | 4 | 3 | 6 | 3 | 6 | 3 |
| Agility | 8 | 3 | 6 | 4 | 3 | 6 | 3 | 6 | 3 |
| Carrying | 13 | 9 | 4 | 2 | QUARTERBACK Awareness 20% Throw power 20 Accuracy short 15 Accuracy mid 15 Accuracy deep 10 Play action 8 Speed 5 Agility 3 Throw on run 3 Acceleration 1 | | | | |
| Catching | 2 | 3 | 12 | 8 | | | | | |
| Route running | 1 | | 12 | 8 | | | | | |
| Ball carrier vision | 13 | 3 | 2 | 2 | | | | | |
| Trucking | 8 | 6 | 1 | 2 | | | | | |
| Elusiveness | 8 | 2 | 4 | 2 | | | | | |
| Catch in traffic | | | 8 | 8 | | | | | |
| Release | | | 8 | 2 | | | | | |
| Spectacular catch | | | 4 | 4 | | | | | |
| Stiff arm | 2 | 3 | 1 | 1 | | | | | |
| Spin move | 4 | | 1 | 1 | | | | | |
| Juke move | 4 | | 1 | 1 | | | | | |
| Jumping | | | 4 | 2 | | | | | |

DEFENSE

| | DEFENSIVE LINE | | | LINEBACKERS | | | DEFENSIVE BACKS | | |
|------------------|----------------|-----|-----|-------------|-----|------|-----------------|-----|-----|
| | LE | DT | RE | LOLB | MLB | ROLB | CB | SS | FS |
| Awareness | 14% | 17% | 14% | 16% | 13% | 16% | 14% | 18% | 16% |
| Tackle | 10 | 9 | 10 | 10 | 17 | 10 | 5 | 12 | 11 |
| Play recognition | 7 | 6 | 7 | 10 | 13 | 10 | 9 | 12 | 11 |
| Speed | 10 | 6 | 10 | 8 | 6 | 8 | 14 | 9 | 11 |
| Acceleration | 10 | 6 | 10 | 5 | 4 | 5 | 14 | 3 | 5 |
| Block shedding | 10 | 11 | 10 | 8 | 13 | 8 | | | |
| Power moves | 12 | 11 | 12 | 8 | 3 | 8 | | | |
| Finesse moves | 12 | 11 | 12 | 8 | 3 | 8 | | | |
| Strength | 5 | 17 | 5 | 5 | 4 | 5 | 2 | 6 | 3 |
| Zone coverage | | | | 5 | 3 | 5 | 9 | 12 | 16 |
| Pursuit | 5 | 3 | 5 | 5 | 9 | 5 | | 9 | 5 |
| Man coverage | | | | 4 | 2 | 4 | 19 | 6 | 5 |
| Agility | 5 | 3 | 5 | 3 | 4 | 3 | 5 | 3 | 5 |
| Hit power | 1 | | 1 | 3 | 4 | 3 | | 6 | 3 |
| Jumping | | | | | | | 5 | 3 | 5 |
| Catching | | | | 2 | | 2 | | 3 | 2 |
| Press | | | | | | | 5 | | |

Punters: 40% kick accuracy, 30% awareness, 30% kick power
 Kickers: 45% kick accuracy, 27% awareness, 27% kick power

Due to rounding, not all positions above sum to 100%

#1 Sports Shoe Review Site

1,275,094 users & 10,513 expert reviews will help you find the right sports shoe

Men



Select size



Running shoes



Search »

The Corescore

The Corescore is a 0-100 score that indicates how liked a running shoe is based on reviews and ratings from running shoe experts and users.

How the Corescore is calculated

The Corescore is a weighted average of user ratings and expert reviews adjusted for spam, shoes with few reviews, what version is reviewed and the credibility of the expert reviewer.

Sort by ↑↓ Corescore ▾

| | | | | | |
|----|---|---------------------------------------|---|-----------|-------------|
| #1 |  | Adidas Crazy Explosive Primeknit |  | 97 | 59 reviews |
| #2 |  | Adidas Explosive Bounce |  | 96 | 95 reviews |
| #3 |  | Adidas Crazy Explosive 2017 Primeknit |  | 96 | 332 reviews |
| #4 |  | Adidas D Lillard 2 |  | 95 | 196 reviews |
| |  | |  | — | |

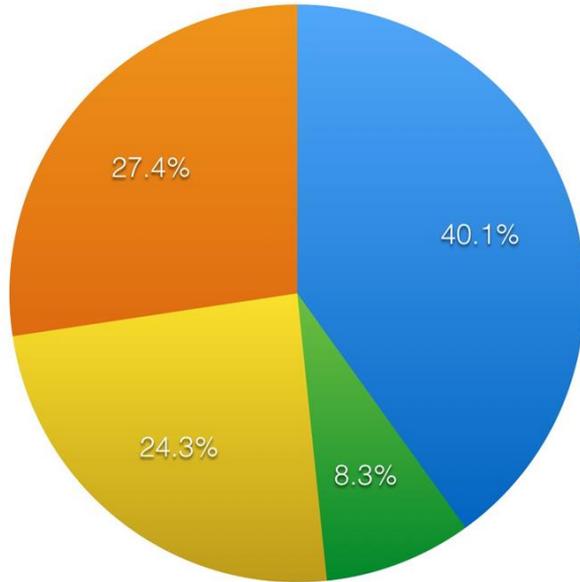
Billboard

HOT 100

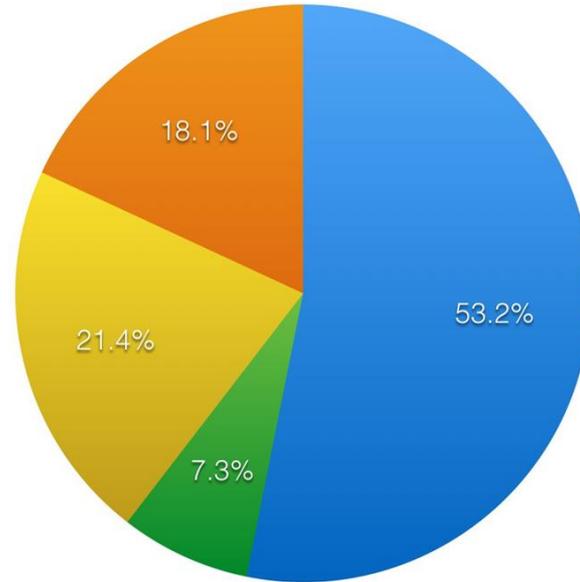
2017 market share of streaming formats in the US under Billboard weightings

- Audio premium
- Audio ad-supported
- Video
- Audio programmed

Current Hot 100 weighting



New Hot 100 weighting



Source: BuzzAngle / Glenn Peoples

 Citizenship and
Immigration Canada

Citizenship and
Immigration Canada

IMMIGRATION

Canada

Applying for a
Permanent Resident
(PR Card)



Canada's Points-Based Immigration System

The six selection criteria and the maximum number of points available for each are as follows:

- Education: 25 pts
- Languages: 24 pts
- Experience: 21 pts
- Age: 10 pts
- Arranged employment: 10 pts
- Adaptability: 10 pts

100 total points!

<https://www.loc.gov/law/help/points-based-immigration/canada.php>

WeBWork for the week....

Read an article on College Rankings

Watch a video on Rotten Tomatoes movie rankings



Lab for Thursday (and Writing Project)

Explore Happiness Rankings and create your own

[World Happiness Report](#)

Where the World's Happiest People Live

Ranking of happiest countries worldwide by index score (2014–2016)



@StatistaCharts

Includes marks for: GDP per capita, social support, healthy life expectancy, freedom of life choices, generosity, perception of corruption

Source: World Happiness Report

KEY VOCAB

- **Metric:** A means of measuring something. An example is that if I wanted to measure deaths from malaria, I might do this by considering the metric of number of deaths per year from malaria. This number will vary from country to country.
- **Absolute variable:** A quantity that does not account for its relative size in any way. For example, the metric of number of deaths per year from malaria does not account for the size of a country.
- **Relative variable:** A quantity that accounts for its relative size in some way. For example, the metric of number of malaria deaths per year per 1,000 people takes into account that a population's size will influence the number of deaths.

YOUR GOALS for Lab/Recitation this week

- **Pick metrics that measure happiness**
[Gapminder](#) or [CIA World Factbook](#)
- Give the metrics weights
 - weights should add to 100%
 - “happiness score” may not necessarily be out of 100
- Gather data for 16 countries (given on lab/excel sheet)
- Rank the countries, based on your metrics and relative weights

Your Goal for the next 2 weeks

- Pick metrics and assign weights
- Gather Data from website
- Enter data and refine in Excel to create happiness scores
- Write a 500-700 word paper that describes your Happiness Ranking

Happiness Ranking Example 1

| Metric Name | Weight |
|-------------------|--------|
| Literacy Rate | 40% |
| Income Per Person | 25% |
| Life Expectancy | 35% |

Countries to Rank for Ex 1 - (year 2011)

Mali

| | |
|-------------------|---------|
| Literacy Rate | 33.4% |
| Income Per Person | \$1,880 |
| Life Expectancy | 60 yrs |

Albania

| | |
|-------------------|----------|
| Literacy Rate | 96.8% |
| Income Per Person | \$10,200 |
| Life Expectancy | 76.7 yrs |

[Excel Worksheet HERE](#)

Happiness Ranking Example 2

| Metric Name | Weight |
|--|---------------|
| At least basic access to water-overall | 50% |
| Armed Forces Personnel percent of labor force | 20% |
| Child Mortality 0 to 5 yr olds dying per 1000 born | 30% |

Countries to Rank for Ex 2 - (year 2015)

Turkey

| | |
|--|------|
| Child Mortality 0 to 5 yr olds dying per 1000 born | 13.6 |
| Armed Forces Personnel percent of labor force | 1.72 |
| At least basic access to water-overall | 98.9 |

Belgium

| | |
|--|-------|
| Child Mortality 0 to 5 yr olds dying per 1000 born | 4 |
| Armed Forces Personnel percent of labor force | 0.727 |
| At least basic access to water-overall | 100 |

Excel Worksheet HERE

Problems with my happiness ranking?

| Metric Name | Weight |
|--------------------|---------------|
| Literacy Rate | 40% |
| Income Per Person | 25% |
| Life Expectancy | 35% |

| Metric Name | Weight |
|--|---------------|
| At least basic access to water-overall | 50% |
| Armed Forces Personnel percent of labor force | 20% |
| Child Mortality 0 to 5 yr olds dying per 1000 born | 30% |

Problems with these metric choices?

List 1

Number of malaria deaths (20%)

Number of murders (20%)

Total carbon emissions (40%)

Acres of forests (5%)

Total population (15%)

Problems with these metric choices?

List 2

Percentage of females aged
15+ that are employed (10%)

Overall unemployment rate
(20%)

Murders per 100,000 people
(20%)

Cell phones per 100 people
(30%)

Internet users per 100 people
(20%)

For Lab/Recitation this week

- Bring Laptop Computer or Smart Device
- Look at gapminder.org/data before hand and think about your 5 metrics