

Math in the Media: What Do Ratings Represent?



Math In The Media



RATINGS REPRESENTATION

What do these numbers REPRESENT? (See also [Measuring the Masses](#))

Another key concept to understand is “how big is the TV watching audience?”

Here again, students may search for the answer.

US TV Households Chart

2012-2013	2011-2012	2010-2011
114.2 million HH	114.7 million HH	115.9 million HH
2009-2010	2008-2009	2007-2008
114.9 million HH	114.5 million HH	112.8 million HH
2006-2007	2005-2006	2004-2005
111.4 million HH	110.2 million HH	109.6 million HH



How are “ratings” and “shares” generated? Students should be able to explain

how Nielsen obtains this information. (See [“What TV Ratings Really Mean”](#) for an

explanation) How is this information used?

Nielsen Media Research's role is to measure both what is transmitted and what is received. By doing this, we provide the programmers and advertisers with vital feedback on their audience. Nielsen TV ratings are used like currency in the marketplace of advertiser-supported TV.

When advertisers want a commercial to reach an audience, they need to place it in TV programs which deliver an audience. The more audience a program delivers, the more the commercial time is worth to advertisers. So the amount charged for advertising is usually a negotiated rate per thousand viewers multiplied by the Nielsen Media Research audience estimate (in thousands).

Programs are expensive to produce, whether they attract large audiences or not. In the long run, TV programmers can't pay more for a program than they can earn from selling advertising in it.

(Source: ["What TV Ratings Really Mean"](#))

Looking at rating information tells us which programs are popular (most watched) and which are not (least watched). Sales people use detailed information obtained from the ratings to attract business people who want to advertise their products or services, where their commercial will get the most attention.

Example: A tire dealer might decide that in order to reach men, he will buy airtime to advertise his tires during a televised sporting event, since this type of program seems to attract more men than women.

Question: I have a question that has been killing me for a long time. Every time the Nielsen ratings come up, they always display ratings for a certain show by

age range. For instance, on a recent TV show, they said that it received the most viewers between the ages of 18-24. How on earth do they know how old the viewers are? How do they know if adults or teens watch their shows? While we are on the subject, how do they calculate the viewer numbers? Is our television some kinda tracking device? Basically, how do they know who is watching? – Johanna D.

Televisionary: Your TV isn't a tracking device, Johanna, but the boxes the folks at Nielsen place in sample families' homes certainly are. I've covered this before, but it's been a while, so what the heck? Others are probably wondering about this kind of thing, too. Here are the basics.

Nielsen uses a representative sample of U.S. TV households to determine who's watching what and when – for obvious reasons, tracking each of the country's 99 million households with TVs is out of the question. The sample is made up of more than 5,000 houses, containing more than 13,000 viewers, that are randomly picked in order to represent a wide range of demographics and locales. Extrapolating from that, in theory, provides a picture of what the whole country is watching at any given time, within a certain range of error.

Exactly how do they measure? Using a few methods. They know the age, gender, etc. of each family member when they choose which households to work with. Meters are installed on every video device in the home – TV sets, cable boxes, VCRs, satellite dishes – to record which shows each is tuned to. Also, the company uses "people meters" to keep track of which person in the house is watching, and diaries and other methods are used to gather numbers on a market-by-market basis.

Demographics Within the U.S. Television Homes

	2003-04	2004-05	2005-06
Households	108,400,000	109,600,000	110,200,000
Persons 2+	275,580,000	277,930,000	280,500,000
Women 18+	109,860,000	111,070,000	111,990,000
Men 18+	101,540,000	102,660,000	103,840,000
Women 55+	35,180,000	35,340,000	36,210,000
Men 55+	28,290,000	28,850,000	29,720,000
Teens 12-17	24,700,000	24,560,000	24,710,000
Children 2-11	39,480,000	39,640,000	39,960,000

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Source: Aug.25, 2005 PR Wire story

[http://www.hispanicbusiness.com/news/newsbyid.
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Persons Using Television

	2003-04	2004-05	Chg.
Teens 12-17	27.4	28.3	+0.9
Persons 12-34	30.5	31.4	+0.9
Females 12-34	31.9	32.9	+1.0
Adults 18-34	31.7	32.6	+0.9
Women 18-34	33.7	34.8	+1.1
Adults 18-49	36.3	37.3	+1.0
Women 18-49	38.0	39.3	+1.3
Adults 25-54	40.7	41.4	+0.7
Women 25-54	42.3	43.3	+1.0
Adults 35+	46.9	47.5	+0.6
Adults 50+	51.4	51.6	+0.2

Source: Magna Global USA analysis of copyrighted Nielsen Media Research data. Seven-network affiliates includes PAX and the six broadcast networks regardless of whether they're airing network programming (e.g., 10-11pm on Fox, WB, and UPN affiliates)