

Question 1

Dreams Recalled during One Week

	None	1 to 4	5 or more	Total
Group X	15	28	57	100
Group Y	21	11	68	100
Total	36	39	125	200

The data in the table above were produced by a sleep researcher studying the number of dreams people recall when asked to record their dreams for one week. Group X consisted of 100 people who observed early bedtimes, and Group Y consisted of 100 people who observed later bedtimes. If a person is chosen at random from those who recalled at least 1 dream, what is the probability that the person belonged to Group Y?

A. $\frac{68}{100}$

B. $\frac{79}{100}$

C. $\frac{79}{164}$

D. $\frac{164}{200}$

total: how many recalled at least

1 dream

$$39 + 125 = 164$$

belong to y

$$11 + 68 = 79$$

$$79/164$$

Question 2

Results on the Bar Exam of Law School Graduates

	Passed bar exam	Did not pass bar exam
Took review course	18	82
Did not take review course	7	93

The table above summarizes the results of 200 law school graduates who took the bar exam. If one of the surveyed graduates who passed the bar exam is chosen at random for an interview, what is the probability that the person chosen did not take the review course?

A. $\frac{18}{25}$

B. $\frac{7}{25}$

C. $\frac{25}{200}$

D. $\frac{7}{200}$

total who passed = $18 + 7 = 25$

who didn't take Review = 7

$$7/25$$

Question 3

	Age		Total
Gender	Under 40	40 or older	
Male	12	2	14
Female	8	3	11
Total	20	5	25

The table above shows the distribution of age and gender for 25 people who entered a contest. If the contest winner will be selected at random, what is the probability that the winner will be either a female under age 40 or a male age 40 or older?

A. $\frac{4}{25}$

B. $\frac{10}{25}$

C. $\frac{11}{25}$

D. $\frac{16}{25}$

$$\text{total} = 25$$

$$2 + 8 = 10$$

$$\frac{10}{25}$$

Question 4

Movies with Greatest Ticket Sales in 2012

MPAA Rating	Type of movie				Total
	Action	Animated	Comedy	Drama	
PG	2	7	0	2	11
PG-13	10	0	4	8	22
R	6	0	5	6	17
Total	18	7	9	16	50

The table above represents the 50 movies that had the greatest ticket sales in 2012, categorized by movie type and Motion Picture Association of America (MPAA) rating. What proportion of the movies are comedies with a PG-13 rating?

A. $\frac{2}{25}$

B. $\frac{9}{50}$

C. $\frac{2}{11}$

D. $\frac{11}{25}$

$$\frac{4}{50} \text{ comedy PG-13}$$

total movies

Reduce

$$2/25$$

Question 5

Number of Registered Voters
in the United States in 2012, in Thousands

Region	Age, in years					Total
	18 to 24	25 to 44	45 to 64	65 to 74	75 and older	
Northeast	2,713	8,139	10,986	3,342	2,775	27,975
Midwest	3,453	11,237	13,865	4,221	3,350	36,126
South	5,210	18,072	21,346	7,272	4,969	56,869
West	3,390	10,428	11,598	3,785	2,986	32,187
Total	14,766	47,896	57,795	18,620	14,080	153,157

The table above shows the number of registered voters in 2012, in thousands, in four geographic regions and five age groups. Based on the table, if a registered voter who was 18 to 44 years old in 2012 is chosen at random, which of the following is closest to the probability that the registered voter was from the Midwest region?

A) 0.10

B) 0.25

C) 0.40

D) 0.75

total 14766 + 47896 = 62662

want 3453 + 11237 = 14690

$$\frac{14690}{62662} = .2344$$

Question 6

Type of surgeon	Major professional activity		Total
	Teaching	Research	
General	258	156	414
Orthopedic	119	74	193
Total	377	230	607

In a survey, 607 general surgeons and orthopedic surgeons indicated their major professional activity.

The results are summarized in the table above. If one of the surgeons is selected at random, which of the following is closest to the probability that the selected surgeon is an orthopedic surgeon whose indicated professional activity is research?

A) 0.122

B) 0.196

C) 0.318

D) 0.379

total 607

want 74

$$\frac{74}{607} = .1219$$

Question 7

Ice Cream and Topping Selections

		Flavor	
		Vanilla	Chocolate
Topping	Hot fudge	8	6
	Caramel	5	6

The table above shows the flavors of ice cream and the toppings chosen by the people at a party. Each person chose one flavor of ice cream and one topping. Of the people who chose vanilla ice cream, what fraction chose hot fudge as a topping?

A) $\frac{8}{25}$ B) $\frac{5}{13}$ C) $\frac{13}{25}$ D) $\frac{8}{13}$

vanilla = 8 + 5 = 13

$$\frac{8}{13}$$

Question 8

Where Do People Get Most of Their Medical Information?

Source	Percent of those surveyed
Doctor	63%
Internet	13%
Magazines/brochures	4%
Pharmacy	6%
Television	2%
Other: none of the above	7%

The table above shows a summary of 200 responses to a survey question. Based on the table, how many of those surveyed get most of their medical information from either a doctor or the Internet?

A) 865

B) 587

C) 912

D) 926

$$63 + 13 = 76\%$$

$$76\% \rightarrow .76$$

$$.76 \times 1200$$

$$912$$

Question 9

Feeding Information for Boarded Pets

	fed only dry food	fed both wet and dry food	Total
Cats	5	11	16
Dogs	2	23	25
Total	7	34	41

The table above shows the kinds of foods that are fed to the cats and dogs currently boarded at a pet care facility. What fraction of the dogs are fed only dry food?

A) $\frac{2}{41}$

B) $\frac{2}{25}$

C) $\frac{7}{41}$

D) $\frac{7}{25}$

↓
total

$$\text{dry only} = 2$$

$$\text{total dogs} = 25$$

$$2/25$$

Question 10

Number of Adults Contracting Colds

	Cold	No cold	Total
Vitamin C	21	129	150
Sugar pill	33	117	150
Total	54	246	300

The table shows the results of a research study that investigated the therapeutic value of vitamin C in preventing colds. A random sample of 300 adults received either a vitamin C pill or a sugar pill each day during a 2-week period, and the adults reported whether they contracted a cold during that time period. What proportion of adults who received a sugar pill reported contracting a cold?

A) $\frac{11}{18}$

B) $\frac{11}{50}$

C) $\frac{9}{50}$

D) $\frac{11}{100}$

Reduce

$$\frac{33}{150} = 3/3$$

$$11/50$$