Question ID 1353b86e

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■☐☐

1.1

Colors of Marbles in a Bag

Color	Number
Red	8
Blue	10
Green	22
Total	40

The table shows the number of different colors of marbles in a bag. If a marble is chosen at random from the bag, what is the probability that the marble will be blue?

A. $\dfrac{30}{40}$

B. $\dfrac{22}{40}$

C. $\dfrac{18}{40}$

D. $\dfrac{10}{40}$

Question ID d89c1513

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■☐☐

ID: d89c1513

1.2

Customer Purchases at a Gas Station

	Beverage purchased	Beverage not purchased	Total
Gasoline purchased	60	25	85
Gasoline not purchased	35	15	50
Total	90	40	135

On Tuesday, a local gas station had 135 customers. The table above summarizes whether or not the customers on Tuesday purchased gasoline, a beverage, both, or neither. Based on the data in the table, what is the probability that a gas station customer selected at random on that day did not purchase gasoline?

A. $\dfrac{15}{50}$

B. $\dfrac{15}{40}$

C. $\dfrac{35}{50}$

D. $\dfrac{50}{135}$

Question ID 46545dd6

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■ ☐ ☐

ID: 46545dd6

1.3

Number of High School Students Who Completed Summer Internships

High school	Year				
	2008	2009	2010	2011	2012
Foothill	87	80	75	76	70
Valley	44	54	65	76	82
Total	131	134	140	152	152

The table above shows the number of students from two different high schools who completed summer internships in each of five years. No student attended both schools. Of the students who completed a summer internship in 2010, which of the following represents the fraction of students who were from Valley High School?

A. $\dfrac{10}{140}$

B. $\dfrac{65}{140}$

C. $\dfrac{75}{140}$

D. $\dfrac{65}{75}$

Question ID 16cea46c

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■☐☐

ID: 16cea46c

1.4

Voice type	Number of singers
Countertenor	4
Tenor	6
Baritone	10
Bass	5

A total of 25 men registered for singing lessons. The frequency table shows how many of these singers have certain voice types. If one of these singers is selected at random, what is the probability he is a baritone?

A. 0.10

B. 0.40

C. 0.60

D. 0.67

Question ID b680e76d

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■□□

ID: b680e76d

1.5

A survey taken by 1,000 students at a school asked whether they played school sports. The table below summarizes all 1,000 responses from the students surveyed.

	Males	Females
Play a school sport	312	220
Do not play a school sport	?	216

How many of the males surveyed responded that they do not play a school sport?

A. 109

B. 252

C. 468

D. 688

Question ID 60caadfd

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■□□

ID: 60caadfd

1.6

Each rock in a collection of 70 rocks was classified as either igneous, metamorphic, or sedimentary, as shown in the frequency table.

Classification	Frequency
igneous	10
metamorphic	33
sedimentary	27

If one of these rocks is selected at random, what is the probability of selecting a rock that is igneous?

A. $\frac{10}{27}$

B. $\frac{10}{33}$

C. $\frac{10}{60}$

D. $\frac{10}{70}$

Question ID e5b5fbdd

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■☐☐

ID: e5b5fbdd   1.7

Of the 8 planets in our solar system, 4 are considered rocky. If a student randomly selects 1 of those 8 planets as a topic for a report, what is the probability that the selected planet will be rocky?

A. $\dfrac{1}{8}$

B. $\dfrac{1}{4}$

C. $\dfrac{1}{2}$

D. 2

Question ID ec7b0eb8

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■ ☐ ☐

1.8

Texting behavior	Talks on cell phone daily	Does not talk on cell phone daily	Total
Light	110	146	256
Medium	139	164	303
Heavy	166	74	240
Total	415	384	799

In a study of cell phone use, 799 randomly selected US teens were asked how often they talked on a cell phone and about their texting behavior. The data are summarized in the table above. If one of the 799 teens surveyed is selected at random, what is the probability that the teen talks on a cell phone daily?

A. $\dfrac{1}{799}$

B. $\dfrac{415}{799}$

C. $\dfrac{384}{415}$

D. $\dfrac{384}{799}$

Question ID 12dbe3de

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■ □ □

ID: 12dbe3de   1.9

A store received a shipment of 1,000 MP3 players, 4 of which were defective. If an MP3 player is randomly selected from this shipment, what is the probability that it is defective?

A. 0.004

B. 0.04

C. 0.4

D. 4

Question ID 2a08d878

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■□□

1.10

There are n nonfiction books and 12 fiction books on a bookshelf. If one of these books is selected at random, what is the probability of selecting a nonfiction book, in terms of n ?

A. $\dfrac{n}{12}$

B. $\dfrac{n}{n+12}$

C. $\dfrac{12}{n}$

D. $\dfrac{12}{n+12}$

Question ID 1dcea480

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■ ☐ ☐

ID: 1dcea480   1.11

A bag contains a total of 60 marbles. A marble is to be chosen at random from the bag. If the probability that a blue marble will be chosen is 0.35, how many marbles in the bag are blue?

A. 21

B. 25

C. 35

D. 39

Question ID 4e527894

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■□□

1.12

There are 20 buttons in a bag: 8 white buttons, 2 orange buttons, and 10 brown buttons. If one of these buttons is selected at random, what is the probability of selecting a white button?

A. $\frac{2}{20}$

B. $\frac{8}{20}$

C. $\frac{10}{20}$

D. $\frac{12}{20}$

Question ID 0a99e5bb

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Probability and conditional probability	■☐☐

ID: 0a99e5bb

1.13

$-13, 4, 23$

A data set of three numbers is shown. If a number from this data set is selected at random, what is the probability of selecting a negative number?

A. 0

B. $\frac{1}{3}$

C. $\frac{2}{3}$

D. 1