Question ID 8956c389

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Probability and conditional probability	Hard

ID: 8956c389

The table summarizes the distribution of age and assigned group for 90 participants in a study.

	$0–9$ years	$10–19$ years	$20+$ years	Total
Group A	5	17	8	30
Group B	6	8	16	30
Group C	19	5	6	30
Total	30	30	30	90

One of these participants will be selected at random. What is the probability of selecting a participant from group A, given that the participant is at least 10 years of age?

A. $\frac{5}{18}$

B. $\frac{5}{12}$

C. $\frac{17}{30}$

D. $\frac{5}{6}$

Question ID 1ba97e3e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Probability and conditional probability	Hard

ID: 1ba97e3e

At a movie theater, there are a total of 350 customers. Each customer is located in either theater A, theater B, or theater C. If one of these customers is selected at random, the probability of selecting a customer who is located in theater A is 0.48, and the probability of selecting a customer who is located in theater B is 0.24. How many customers are located in theater C?

A. 28

B. 40

C. 84

D. 98

Question ID c2de18fb

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Probability and conditional probability	Hard

ID: c2de18fb

	Site A	Site B	Total
Tulip	35	15	50
Daffodil	31	21	52
Total	66	36	102

The table shows the distribution of two types of flowers at two different sites. If a flower represented in the table is selected at random, what is the probability of selecting a flower from site A, given that the flower is a tulip? (Express your answer as a decimal or fraction, not as a percent.)

Question ID 1a983a4f

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Probability and conditional probability	Hard

ID: 1a983a4f

Each vertex of a 14-sided polygon is labeled with one of the 14 letters A through N, with a different letter at each vertex. If one vertex is selected at random, what is the probability that the letter D will be at the selected vertex? (Express your answer as a decimal or fraction, not as a percent.)

Question ID cb3bf491

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Probability and conditional probability	Hard

ID: cb3bf491

The table summarizes the distribution of age and assigned group for 90 participants in a study.

	$0-9$ years	$10-19$ years	$20+$ years	Total
Group A	7	14	9	30
Group B	6	4	20	30
Group C	17	12	1	30
Total	30	30	30	90

One of these participants will be selected at random. What is the probability of selecting a participant from group A, given that the participant is at least 10 years of age? (Express your answer as a decimal or fraction, not as a percent.)

Question ID ffbe483a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Probability and conditional probability	Hard

ID: ffbe483a

A box contains 13 red pens and 37 blue pens. If one of these pens is selected at random, what is the probability of selecting a red pen? (Express your answer as a decimal or fraction, not as a percent.)

Question ID cbd3836a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Probability and conditional probability	Hard

ID: cbd3836a

The table summarizes the distribution of color and shape for 100 tiles of equal area.

	Red	Blue	Yellow	Total
Square	10	20	25	55
Pentagon	20	10	15	45
Total	30	30	40	100

If one of these tiles is selected at random, what is the probability of selecting a red tile? (Express your answer as a decimal or fraction, not as a percent.)

Question ID a472687e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Probability and conditional probability	Hard

ID: a472687e

At a conference, there are a total of 275 attendees. Each attendee is assigned to either group A, group B, or group C. If one of these attendees is selected at random, the probability of selecting an attendee who is assigned to group A is 0.44 and the probability of selecting an attendee who is assigned to group B is 0.24. How many attendees are assigned to group C?

Question ID 12df88a4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Probability and conditional probability	Hard

ID: 12df88a4

In a bag, there are 7 red, 4 white, 33 blue, and 33 yellow cubes. If one of these cubes is selected at random, what is the probability of selecting a cube that is neither blue nor yellow?

A. $\frac{6}{7}$

B. $\frac{7}{11}$

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

D. $\frac{1}{7}$

Question ID 9b7ed2d0

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Probability and conditional probability	Hard

ID: 9b7ed2d0

A grove has 6 rows of birch trees and 5 rows of maple trees. Each row of birch trees has 8 trees 20 feet or taller and 6 trees shorter than 20 feet. Each row of maple trees has 9 trees 20 feet or taller and 7 trees shorter than 20 feet. A tree from one of these rows will be selected at random. What is the probability of selecting a maple tree, given that the tree is 20 feet or taller?

A. $\frac{9}{164}$

B. $\frac{3}{10}$

C. $\frac{15}{31}$

D. $\frac{9}{17}$