



Probability Union, Intersection, Complement - Word Problem Counts and Percents to Probability

<p>1 If one of the conference attendees is chosen at random, what is the probability they are in the shop B group but not the shop A group?</p> <p>In a group of 50 conference attendees, 35 joined workshop A, 4 joined both, and 8% are in neither group.</p>	<table border="1"> <tr> <td>A</td> <td>$\frac{11}{50}$</td> <td>B</td> <td>$\frac{2}{25}$</td> <td>C</td> <td>$\frac{19}{50}$</td> </tr> <tr> <td>D</td> <td>$\frac{31}{50}$</td> <td>E</td> <td>$\frac{3}{10}$</td> <td></td> <td></td> </tr> </table>	A	$\frac{11}{50}$	B	$\frac{2}{25}$	C	$\frac{19}{50}$	D	$\frac{31}{50}$	E	$\frac{3}{10}$			<p>If one of the employees is chosen at random, what is the probability they are in the marketing group?</p> <p>In a group of 50 employees, 4 work in both, 20% are in the sales group but not the marketing group, and 6% are in the marketing group but not the sales group.</p>	<table border="1"> <tr> <td>A</td> <td>$\frac{7}{10}$</td> <td>B</td> <td>$\frac{11}{50}$</td> <td>C</td> <td>$\frac{3}{50}$</td> </tr> <tr> <td>D</td> <td>$\frac{7}{50}$</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	A	$\frac{7}{10}$	B	$\frac{11}{50}$	C	$\frac{3}{50}$	D	$\frac{7}{50}$				
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<p>3 In a group of 25 vehicles, 5 are both, 3 are in the SUV group but not the red group, and 40% are in the red group but not the SUV group.</p>	<p>4 Among the households in the internet group, what is the probability that a randomly chosen one is also in the streaming group?</p> <p>In a group of 20 households, 3 have both, 2 are in the internet group but not the streaming group, and 5% are in the streaming group but not the internet group.</p>	<table border="1"> <tr> <td>A</td> <td>$\frac{3}{4}$</td> <td>B</td> <td>$\frac{1}{5}$</td> <td>C</td> <td>$\frac{3}{5}$</td> </tr> <tr> <td>D</td> <td>$\frac{1}{4}$</td> <td>E</td> <td>$\frac{3}{20}$</td> <td></td> <td></td> </tr> </table>	A	$\frac{3}{4}$	B	$\frac{1}{5}$	C	$\frac{3}{5}$	D	$\frac{1}{4}$	E	$\frac{3}{20}$															
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<p>5 If one of the vehicles is chosen at random, what is the probability they are in at least one of the two groups?</p> <p>In a group of 20 vehicles, 40% are in the electric group but not the under 5 yrs group, 35% are in the under 5 yrs group but not the electric group, and 2 are in neither group.</p>	<table border="1"> <tr> <td>A</td> <td>$\frac{9}{10}$</td> <td>B</td> <td>$\frac{21}{20}$</td> <td>C</td> <td>$\frac{6}{5}$</td> </tr> <tr> <td>D</td> <td>$\frac{1}{10}$</td> <td>E</td> <td>$\frac{17}{20}$</td> <td></td> <td></td> </tr> </table>	A	$\frac{9}{10}$	B	$\frac{21}{20}$	C	$\frac{6}{5}$	D	$\frac{1}{10}$	E	$\frac{17}{20}$			<p>6 Among the students in the drama group, what is the probability that a randomly chosen one is also in the band group?</p> <p>In a group of 100 students, 79 are in band, 23% are in drama, and 16 are in neither group.</p>	<table border="1"> <tr> <td>A</td> <td>$\frac{18}{79}$</td> <td>B</td> <td>$\frac{14}{23}$</td> <td>C</td> <td>$\frac{18}{23}$</td> </tr> <tr> <td>D</td> <td>$\frac{23}{100}$</td> <td>E</td> <td>$\frac{9}{50}$</td> <td></td> <td></td> </tr> </table>	A	$\frac{18}{79}$	B	$\frac{14}{23}$	C	$\frac{18}{23}$	D	$\frac{23}{100}$	E	$\frac{9}{50}$		
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<p>7 If one of the customers is chosen at random, what is the probability they are in the coupon group but not the bought group?</p> <p>In a group of 50 customers, 96% made a purchase this month, 16% used a coupon, and 7 did both.</p>	<table border="1"> <tr> <td>A</td> <td>$\frac{1}{50}$</td> <td>B</td> <td>$\frac{7}{50}$</td> <td>C</td> <td>$\frac{3}{10}$</td> </tr> <tr> <td>D</td> <td>$\frac{4}{25}$</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	A	$\frac{1}{50}$	B	$\frac{7}{50}$	C	$\frac{3}{10}$	D	$\frac{4}{25}$					<p>8 Among the students in the art group, what is the probability that a randomly chosen one is also in the comp sci group?</p> <p>In a group of 100 students, 87% take art, 12% take both, and 5 are in the comp sci group but not the art group.</p>	<table border="1"> <tr> <td>A</td> <td>$\frac{4}{29}$</td> <td>B</td> <td>$\frac{17}{87}$</td> <td>C</td> <td>$\frac{87}{100}$</td> </tr> <tr> <td>D</td> <td>$\frac{3}{25}$</td> <td>E</td> <td>$\frac{12}{17}$</td> <td></td> <td></td> </tr> </table>	A	$\frac{4}{29}$	B	$\frac{17}{87}$	C	$\frac{87}{100}$	D	$\frac{3}{25}$	E	$\frac{12}{17}$		
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