

Solution (Mixture) Word Problems

1. Jotham needs 70 liters of a 50% solution of an alcohol solution. He has a 30% and an 80% solution available. How many liters of the 30% and how many liters of the 80% solutions should he mix to make the 50% solution?
2. How much 80% antifreeze solution do you need to mix with 15 gallons of 20% antifreeze solution to create a 65% antifreeze solution?
3. Joy is preparing 15 liters of a 25% saline solution. She only has 40% and 10% solution in her lab. How many liters of the 40% and how many liters of the 10% should she mix to make the 25% solution?
4. A scientist needs 65 liters of a 15% alcohol solution. She has available a 25% and a 12% solution. How many liters of the 25% and how many liters of the 12% solutions should she mix to make the 15% solution?
5. How much 40% antifreeze solution should Karla mix with 24 liters of 90% antifreeze solution to create a 70% antifreeze solution?
6. A scientist needs 120 milliliters of a 20% acid solution for an experiment. The lab has available a 25% and a 10% solution. How many liters of the 25% and how many liters of the 10% solutions should the scientist mix to make the 20% solution?
7. A 40% antifreeze solution is to be mixed with a 70% antifreeze solution to get 240 liters of a 50% solution. How many liters of the 40% and how many liters of the 70% solutions will be used?
8. How much 10% acid solution should Pamela mix with 3 gallons of 75% acid solution to create a 40% acid solution?
9. A 90% antifreeze solution is to be mixed with a 75% antifreeze solution to get 360 liters of an 85% solution. How many liters of the 90% and how many liters of the 75% solutions will be used?

Key

1. 42 liters of the 30% solution and 28 liters of the 80% solution
2. 45 gallons of the 80% solution
3. 7.5 liters of each of the solutions
4. 15 liters of the 25% solution and 50 liters of the 12% solution
5. 16 liters of the 40% solution
6. 80 mL of the 25% solution and 40 mL of the 10% solution
7. 160 liters of the 40% solution and 80 liters of the 70% solution
8. 3.5 gallons of the 10% solution
9. 120 liters of the 75% solution and 240 liters of the 90% solution