

Equation of a Circle Problems 1-5

1. Work these problems on this paper
2. Write answer to problems 1-3 in $X^2 + Y^2 = R^2$ form.
3. Write answers to problems 4 & 5 in General Form ($=0$).

1. Find the equation in standard form of the circle with center $(-1, -3)$ and radius of 5.

[1] _____

2. Find the equation in standard form of the circle with center $(-4, 6)$ and radius of 6.

[2] _____

3. Find the equation in standard form of the circle with center $(-5, -2)$ and radius of 4.

[3] _____

4. Find the equation in standard form of the circle with center $(-3, -4)$ and radius of 3.

[4] _____

5. Find the equation in standard form of the circle with center $(3, 4)$ and radius of 3.

[5] _____

Chemical Solution Problems "Type 1" 6-10

1. Work these problems on your own paper.
2. These 5 problems are "Type 1" where you are given the final amount of solution.
3. These problems require 2 Equations/2 Unknowns to solve.

6. A solution of 71% alcohol is to be mixed with a solution of 27% alcohol to form 176 liters of a 40% solution.
How many liters of the 71% solution must be used?

[6] _____

7. A solution of 56% pesticide is to be mixed with a solution of 23% pesticide to form 198 liters of a 53% solution. How many liters of the 56% solution must be used?

[7] _____

8. A solution of 47% vinegar is to be mixed with a solution of 29% vinegar to form 216 liters of a 42% solution. How many liters of the 47% solution must be used?

[8] _____

9. A solution of 67% fertilizer is to be mixed with a solution of 26% fertilizer to form 410 liters of a 51% solution. How many liters of the 67% solution must be used?

[9] _____

10. A solution of 45% alcohol is to be mixed with a solution of 22% alcohol to form 207 liters of a 41% solution. How many liters of the 45% solution must be used?

[10] _____

Chemical Solution Problems “Type 2” 11-15

1. Work these problems on your own paper.
2. These “Type 2” problems give you the initial amount of solution.
3. These problems need one equation/one unknown to solve.

11. How much pure water must be mixed with 4 pints of 90% developer to produce a mixture that is 21% developer?

[11] _____

12. How much pure water must be mixed with 9 pints of 50% developer to produce a mixture that is 35% developer?

[12] _____

13. How much pure water must be mixed with 8 pints of 60% developer to produce a mixture that is 18% developer?

[13] _____

14. Two hundred liters of a solution was available, but the solution was 60% alcohol. Ernest needed a solution which was 50% alcohol. How many liters of alcohol had to be extracted so that the solution would be 50% alcohol?

[14] _____

15. Five hundred liters of a solution was available, but the solution was 70% alcohol. Neil needed a solution which was 60% alcohol. How many liters of alcohol had to be extracted so that the solution would be 60% alcohol?

[15] _____