THIRD SPACE LEARNING

Nonlinear System of Equations Worksheet

Algebra

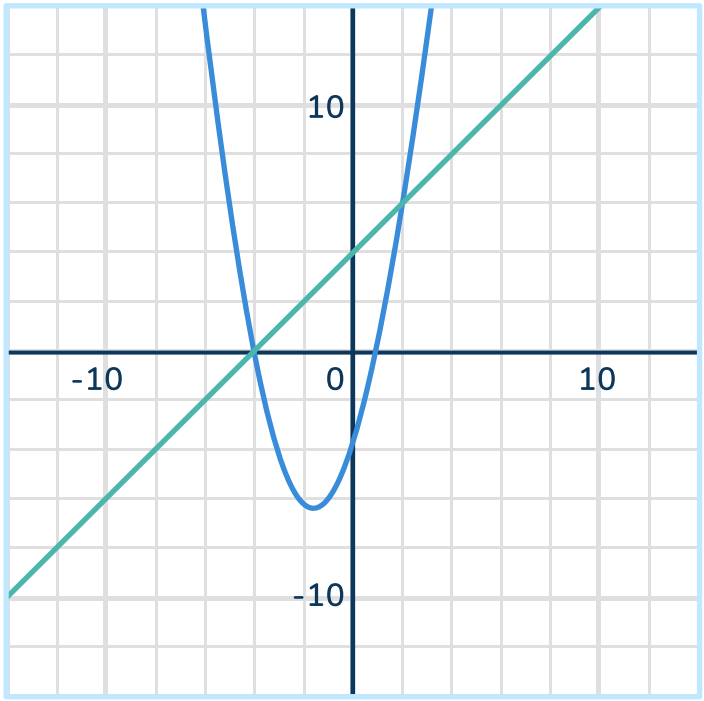
Grades 9 to 12

Questions

Name: .....

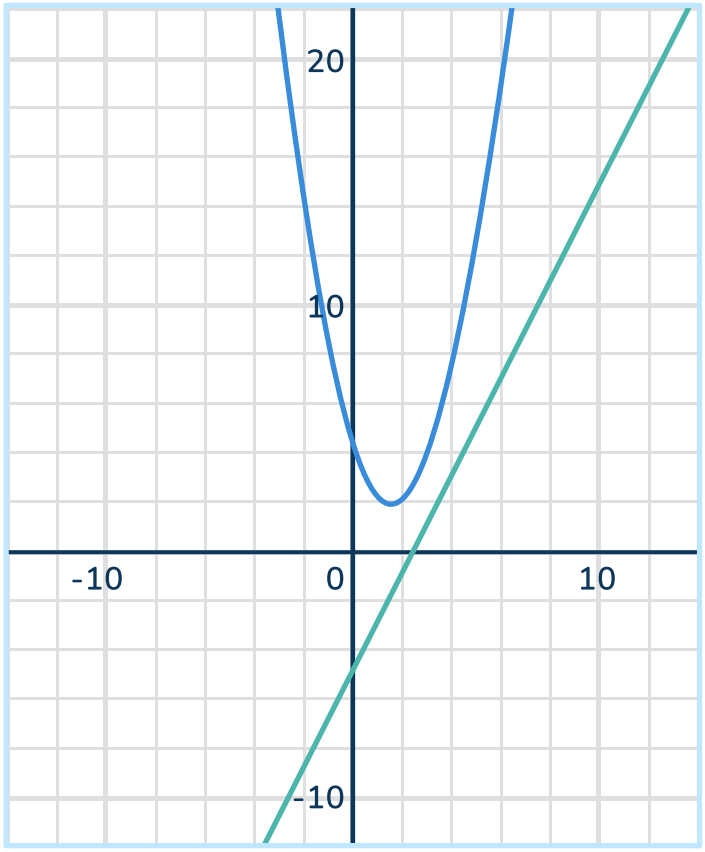
Date: .....

1 Use the graph to estimate the solution(s) of the system.



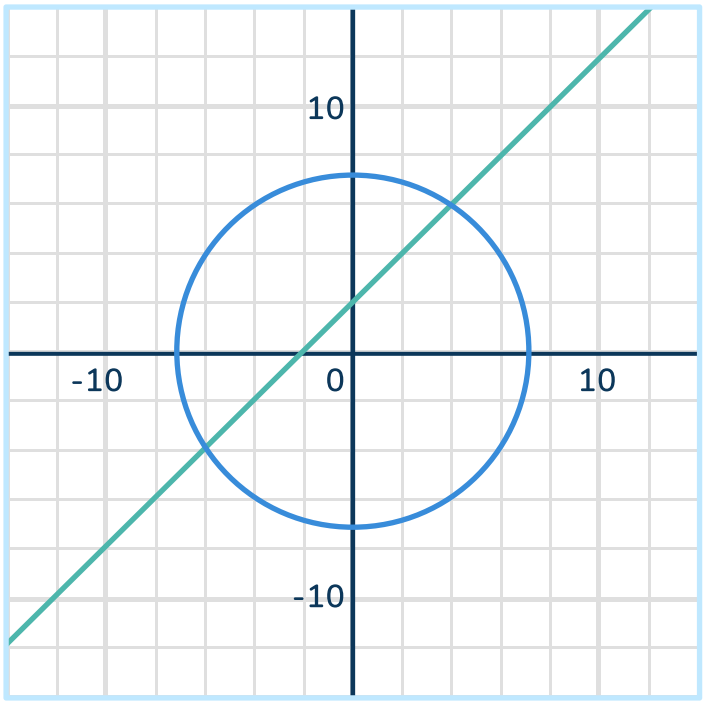
Answer

2 Use the graph to estimate the solution(s) of the system.



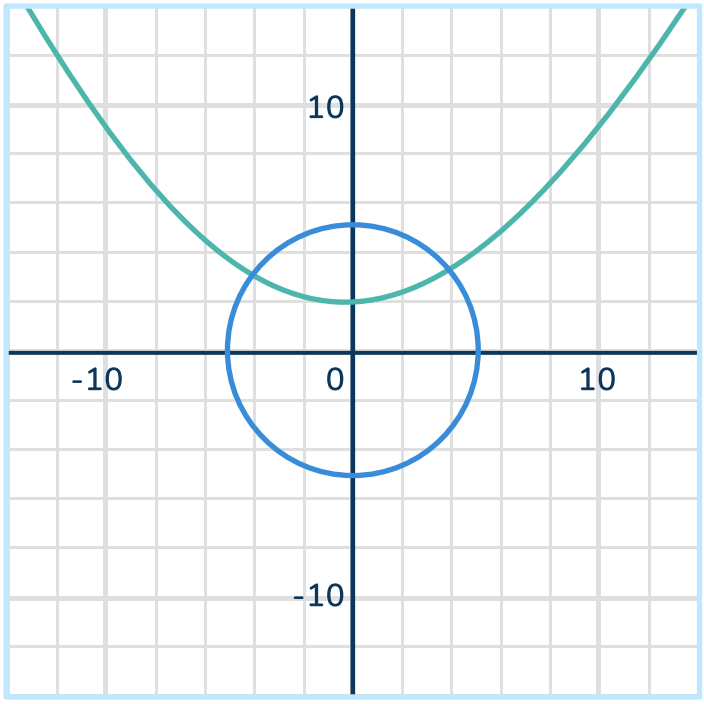
Answer

3 Use the graph to estimate the solution(s) of the system.



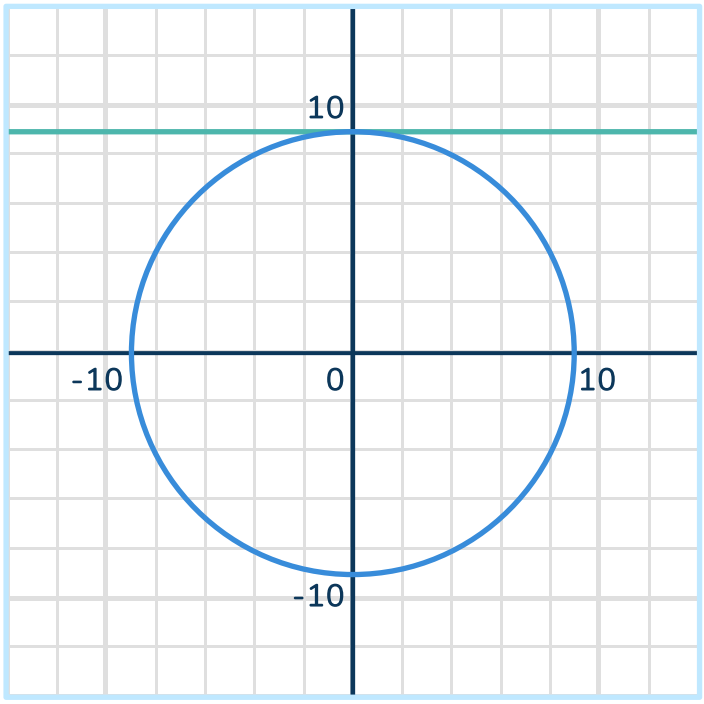
Answer

4 Use the graph to estimate the solution(s) of the system.



Answer

5 Use the graph to estimate the solution(s) of the system.



Answer

6 Solve the system: $y = x^2 - 6x + 5$ and $y = -5x + 25$

Answer

7 Solve the system: $y = 3x + 1$ and $y = x^2 + x - 14$.

Answer

8 Solve the system: $x^2 + y^2 = 36$ and $2x - y = 6$.

Answer

9 Solve the system: $y = -x + 2$ and $y = x^2 + 4x - 12$.

Answer

10 Solve the system: $x^2 + y^2 = 25$ and $y = 2x - 5$.

Answer

11 Solve the system: $x^2 + y^2 = 30.25$ and $x = y + 5.5$.

Answer

12 Solve the system: $y - x = 2$ and $y - x^2 = -4$.

Answer

13 Solve the system: $y = x^2 + 2x - 8$ and $y = -x + 10$.

Answer

14 Solve the system: $y = 3x + 5$ and $y = x^2 - x + 1$.

Answer

15 Solve the system: $x^2 + y^2 = 26$ and $y = x + 4$.

Answer

16 Solve the system: $x^2 + y^2 = 18$ and $y = x - 2$.

Answer

17 Solve the system: $6x^2 - 4y^2 = 24$ and $x - 2y = 2$.

Answer

18 Solve the system: $2x^2 + 2y^2 = 64$ and $4x - y = 12$.

Answer

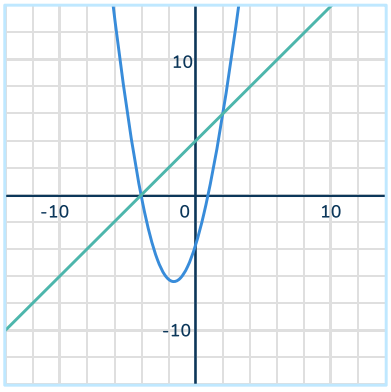
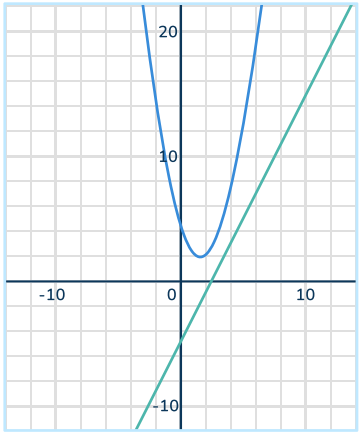
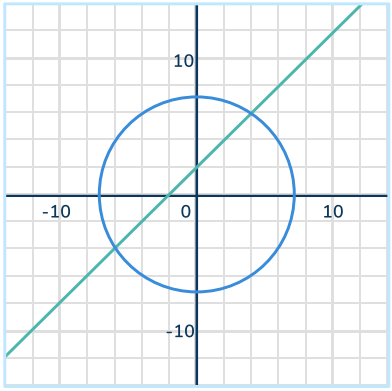
19 Solve the system: $y = x^2 + 3x - 5$ and $y = -2x + 1$.

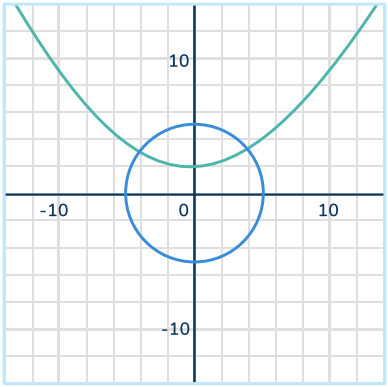
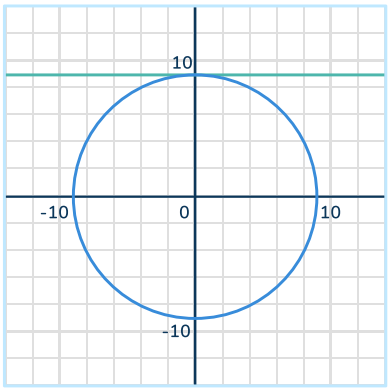
Answer

20 Solve the system: $y = x^2 + x - 7$ and $y = -x + 5$.

Answer

Answers

Question number	Question	Answers	Standard
1	Use the graph to estimate the solution(s) of the system. 	Coordinates close to (−4,0) and (2,6)	HS.A.REI.C.7
2	Use the graph to estimate the solution(s) of the system. 	No solution	HS.A.REI.C.7
3	Use the graph to estimate the solution(s) of the system. 	Coordinates close to(−6,−4) and (4,6)	HS.A.REI.C.7

Question number	Question	Answers	Standard
4	Use the graph to estimate the solution(s) of the system. 	Coordinates close to (4,3) and (–4,3)	HS.A.REI.C.7
5	Use the graph to estimate the solution(s) of the system. 	Coordinates close to (0,9)	HS.A.REI.C.7
6	Solve the system: $y = x^2 - 6x + 5$ and $y = -5x + 25$	Solutions: (5,0), (–4,45)	HS.A.REI.C.7
7	Solve the system: $y = 3x + 1$ and $y = x^2 + x - 14$.	Solutions: (–3,–8), (5,16)	HS.A.REI.C.7
8	Solve the system: $x^2 + y^2 = 36$ and $2x - y = 6$.	Solutions: (4.8, 3.6), (0, –6)	HS.A.REI.C.7
9	Solve the system: $y = -x + 2$ and $y = x^2 + 4x - 12$.	Solutions: (–7,9), (2,0)	HS.A.REI.C.7
10	Solve the system: $x^2 + y^2 = 25$ and $y = 2x - 5$.	Solutions: (4,3), (0,–5)	HS.A.REI.C.7

Question number	Question	Answers	Standard
11	Solve the system: $x^2 + y^2 = 30.25$ and $x = y + 5.5$.	Solutions: (5.5,0), (0,–5.5)	HS.A.REI.C.7
12	Solve the system: $y - x = 2$ and $y - x^2 = -4$.	Solutions: (3,5), (–2,0)	HS.A.REI.C.7
13	Solve the system: $y = x^2 + 2x - 8$ and $y = -x + 10$.	Solutions: (3,7), (–6,16)	HS.A.REI.C.7
14	Solve the system: $y = 3x + 5$ and $y = x^2 - x + 1$	Solutions: (-$2\sqrt{2}$ -2, 11-$6\sqrt{2}$), ($2\sqrt{2}$ + 2, 11 + $6\sqrt{2}$)	HS.A.REI.C.7
15	Solve the system: $x^2 + y^2 = 26$ and $y = x + 4$.	Solutions: (1,5), (–5,–1)	HS.A.REI.C.7
16	Solve the system: $x^2 + y^2 = 18$ and $y = x - 2$.	Solutions: (1 + $2\sqrt{2}$, -1 + $2\sqrt{2}$), (1 - $2\sqrt{2}$, -1 - $2\sqrt{2}$)	HS.A.REI.C.7
17	Solve the system: $6x^2 - 4y^2 = 24$ and $x - 2y = 2$.	Solutions: (2,0), (–2.8, –2.4)	HS.A.REI.C.7
18	Solve the system: $2x^2 + 2y^2 = 64$ and $4x - y = 12$.	Solutions: (4,4), ($\frac{28}{17}$,-$\frac{92}{17}$)	HS.A.REI.C.7
19	Solve the system: $y = x^2 + 3x - 5$ and $y = -2x + 1$.	Solutions: (1,–1), (-6,13)	HS.A.REI.C.7
20	Solve the system: $y = x^2 + x - 7$ and $y = -x + 5$.	Solutions: (-1 +$\sqrt{13}$, 6 - $\sqrt{13}$),(-1-$\sqrt{13}$, 6 +$\sqrt{13}$)	HS.A.REI.C.7

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