## Solving Equations

| Soling Linear | $\begin{gathered} \text { Solving } \\ \text { Ruandict } \\ \text { Cuutitions } \end{gathered}$ | $\begin{aligned} & \text { Solving Systems } \\ & \text { of Linear } \\ & \text { Equations } \end{aligned}$ | ${ }_{\substack{\text { Stupid } \\ \text { quesions }}}^{\substack{\text { a }}}$ | Completing the squares |
| :---: | :---: | :---: | :---: | :---: |
| 100 | 100 | 100 | 100 | 100 |
| 200 | 200 | 200 | 200 | 200 |
| 300 | 300 | 300 | 300 | 300 |
| 400 | 400 | 400 | 400 | 400 |



## Solving Linear Equations for 100.

$$
5 x-3=47 . \quad x=?
$$

| a | 8 |
| :--- | :--- | :--- |
| b | 16 |
| c | 19 |
| d | 10 |
| e | 9 |

## Solving Linear Equations for 200.

$$
\begin{aligned}
& \frac{2}{5} x=8, \quad x=? \\
& \begin{array}{ll}
\text { a } & 8 / 5 \\
\text { b } & 4 \\
\hline \text { c } & 1 / 5 \\
\hline \text { d } & 20 \\
\text { e } & 40
\end{array} \quad . \begin{array}{l}
\end{array} .
\end{aligned}
$$

## Solving Linear Equations for 300.

$3 x+4=-2 x+19, \quad x=?$

| a | 19 |
| :--- | :--- |
| b | $-23 / 3$ |
| c | 4 |
| d | 3 |
| e | -3 |

## Solving Linear Equations for 400.

$$
2 x+16=7 x+1, \quad x=?
$$

| a | -4 |
| :--- | :--- |
| b | 2 |
| c | 3 |
| d | 0 |
| e | -2 |

## Solving Quadratic Equations for 100.

$$
\begin{aligned}
& x^{2}=144, \quad x=\text { ? } \\
& \begin{array}{|l|l|}
\hline \text { a } & 72 \\
\hline \text { b } & 12 \\
\hline \text { c } & -12 \\
\hline \text { d } & -12 \text { or } 12 \\
\hline \text { e } & 144 \text { or }-144 \\
\hline
\end{array}
\end{aligned}
$$

Solving Quadratic Equations for 200.

$$
x^{2}+10 x+16=0, \quad x=?
$$

| a | 4 or -4 |
| :--- | :--- |
| b | -1 or 16 |
| c | 2 or 8 |
| d | -2 or -8 |

$$
\begin{array}{|l|l|}
\hline \text { a } & 4 \text { or }-4 \\
\hline \text { b } & -1 \text { or } 16 \\
\hline \text { c } & 2 \text { or } 8 \\
\hline \text { d } & -2 \text { or }-8 \\
\hline
\end{array}
$$

## Solving Quadratic Equations for 300.

$$
3 x^{2}+2 x=0, \quad x=?
$$

| a | 2 or 3 |
| :--- | :--- |
| b | -3 or 0 |
| c | 0 or $1 / 2$ |
| d | 0 or $-3 / 2$ |
| e | $3 / 2$ or 0 |

## Solving Quadratic Equations for 400.

$$
\begin{aligned}
& x(x-3)+2=0, \quad x=? \\
& \text { a } 3 \text { or } 2 \\
& \text { b } 0 \text { or } 3 \\
& \text { c } 1 \text { or }-2 \\
& \text { d } 2 \text { or } 1 \\
& \text { e }-2 \text { or } 2
\end{aligned}
$$

## Solving Systems of Linear Equations for 100.

$$
\begin{array}{r}
x+y=0 \\
-x+y=4
\end{array}
$$

$$
x=, y=?
$$

$$
\begin{array}{ll}
\mathrm{a} & x=0, y=0 \\
\mathrm{~b} & x=2, y=2 \\
\mathrm{c} & x=-2, y=2 \\
\mathrm{~d} & x=4, y=0 \\
\mathrm{e} & x=-2, y=-2
\end{array}
$$

## Solving Systems of Linear Equations for 200.

$$
\begin{aligned}
2 x+3 y & =25 \\
-2 x+y & =-5
\end{aligned}
$$

$$
x=, y=?
$$

$$
\begin{array}{ll}
\hline \mathrm{a} & x=0, y=0 \\
\mathrm{~b} & x=10, y=5 \\
\mathrm{c} & x=5, y=5 \\
\mathrm{~d} & x=2, y=3 ? \\
\mathrm{e} & x=5, y=-5 ?
\end{array}
$$

## Solving Systems of Linear Equations for 300.

$$
\begin{aligned}
2 x & =y+2 \\
y & =5 x-5
\end{aligned}
$$

$$
x=, y=?
$$

$$
\begin{array}{ll}
\mathrm{a} & x=2, y=1 \\
\mathrm{~b} & x=1, y=1 \\
\mathrm{c} & x=1, y=0 \\
\mathrm{~d} & x=5, y=2 ? \\
\mathrm{e} & x=2, y=-5 ?
\end{array}
$$

## Solving Systems of Linear Equations for 400.

$$
\begin{aligned}
2(x+2)-3 y & =2(y-1)+6 \\
-2(x-1)+y & =2
\end{aligned}
$$

$$
x=, y=?
$$

$$
\begin{array}{ll}
\mathrm{a} & x=-2, y=1 \\
\hline \mathrm{~b} & x=0, y=1 \\
\mathrm{c} & x=0, y=0 \\
\mathrm{c} & x=2, y=1 ? \\
\mathrm{~d} & x=2, y=-3 ?
\end{array}
$$

## Solving Systems of Linear Equations for 500.

$$
\begin{aligned}
& \quad \begin{array}{l}
x(x+2)-3 y=x(x-1)-6 \\
2 x+y(y+2)=y^{2} \\
x=, y=?
\end{array} \\
& \text { a } \quad x=-2, y=1 \\
& \hline \mathrm{~b} \quad x=0, y=1 \\
& \mathrm{c} \quad x=-1, y=1 \\
& \mathrm{~d} \quad x=2, y=1 ? \\
& \mathrm{~d} \quad x=2, y=-3 ?
\end{aligned}
$$

## Stupid questions for 100.

$$
x=x, y=y . \quad x=, y=?
$$

```
a \(\quad x=y, y=x\)
    \(x=0, y=0\)
    \(x=\) anynumber, \(y=\) anynumber
    \(x=y\) ?
    no solution
```


## Stupid questions for 200.

$$
\begin{aligned}
& x=y y=2 \quad x=, y=? \\
& \mathrm{a} \quad x=0, y=-2 \\
& \mathrm{~b} \quad x=-2, y=-2 \\
& \mathrm{c} \quad x=\text { anynumber }, y=\text { anynumber } \\
& \mathrm{d} \quad \text { no solution } \\
& \mathrm{e} \quad x=2, y=2
\end{aligned}
$$

## Stupid questions for 300.

$$
x+y=5 x+y=2 \quad x=, y=?
$$

$$
\begin{array}{ll}
\mathrm{a} & x=y, y=5 \\
\mathrm{~b} & x=2, y=5 \\
\mathrm{c} & x=\text { anynumber }, y=\text { anynumber } \\
\mathrm{d} & x=5, y=2 \\
\mathrm{e} & \text { no solution }
\end{array}
$$

## Stupid questions for 400.

Which solution best describes the following system? $x+y=12 x+y=12 . \quad x=, y=?$

$$
\begin{array}{l|l}
\hline \mathrm{a} & x=y, y=2 \\
\mathrm{~b} & x=12, y=12 \\
\mathrm{c} & x=6, y=6 \\
\mathrm{~d} & \text { no solution } \\
\mathrm{e} & x=\text { anynumber, } y=\text { anynumber }
\end{array}
$$

## Stupid questions for 500.

Let $x^{2}=-9$. What real $x$ solves the problem?

$$
\begin{array}{l|l}
\hline \mathrm{a} & x=-9 \\
\hline \mathrm{~b} & x=9 \\
\hline \mathrm{c} & x=-3 \text { or } x=3 \\
\hline \mathrm{~d} & x=2 / 9 \\
\mathrm{e} & \text { No solution }
\end{array}
$$

## Completing the squares for 100 .

$$
\text { Let }(x+1)^{2}=4 \text {. What is } x=? \text {. }
$$

$$
\begin{array}{ll}
\hline \mathrm{a} & x=4 \text { or } x=-4 \\
\hline \mathrm{~b} & x=2 \text { or } x=-2 \\
\hline \mathrm{c} & x=1 \text { or } x=-1 \\
\mathrm{~d} & x=1 \text { or } x=-3 \\
\mathrm{e} & x=0
\end{array}
$$

## Completing the squares for 200.

$$
\text { Let }(x+3)^{2}=-4 \text {. What is } x=? \text {. }
$$

$$
\begin{array}{ll}
\hline \mathrm{a} & x=4 \text { or } x=-4 \\
\mathrm{~b} & x=3 \text { or } x=-3 \\
\mathrm{c} & x=1 \text { or } x=-1 \\
\mathrm{~d} & \text { No solution } \\
\mathrm{e} & x=0
\end{array}
$$

Completing the squares for 300 .
Let $2(x+1)^{2}-2=16$. What is $x=$ ?

| a | $x=2$ or $x=-2$ |
| :--- | :--- | :--- |
| b | $x=0$ or $x=-16$ |
| c | $x=1$ or $x=-1$ |
| d | $x=2$ or $x=-4$ |
| e | No solution |

## Completing the squares for 400 .

$$
\text { Let }-3(x-2)^{2}+3=-24 . \text { What is } x=? \text {. }
$$

$$
\begin{array}{ll}
\mathrm{a} & x=3 \text { or } x=-3 \\
\mathrm{~b} & x=2 \text { or } x=-2 \\
\mathrm{c} & x=1 \text { or } x=-1 \\
\mathrm{~d} & x=5 \text { or } x=-1 \\
\mathrm{e} & x=0
\end{array}
$$

