**CHECKING YOUR ANSWER**

**Steps:**

1. Write down the equation
2. Draw a vertical line where the equal sign is to make a T-chart
3. Sub the answer in for x
4. Solve each side separately to see if they are equal
5. If both sides are equal, the answer is RIGHT
6. If both sides are not equal, the answer is WRONG

**Example:** Frodo solved the following equation and found out that $x=-2$

Check if his answer is right.

$$4x+25=17$$

Determine if each of the following answers is right by checking.

|  |  |  |
| --- | --- | --- |
| a) $x^{2}+9=16 Answer x=5$ | b) $\frac{x}{3}-1=13 Answer x=36$ | c) $5x-2=18+4x Answer x=20$ |
| d) $4\left(2x+3\right)=10x+6 x=3$ | e) $\frac{2x-17}{5}=\frac{5x+7}{4} x=1$ |

**SOLVING EQUATIONS WITH BRACKETS**

**Steps:**

1. Apply the distributive property
2. Solve for x

1. Solve the following equations:

|  |  |
| --- | --- |
| **Teacher** | **Your Turn** |
| $$3\left(x-2\right)=9$$ | a) $4\left(5+x\right)=-32$ | b) $40=10\left(3x^{2}-8\right)$ |

2. Solve and check the following equation.

$$2\left(5x+4\right)=68$$

**SOLVING EQUATIONS WITH LIKE TERMS**

**Steps:**

1. Collect like terms
2. Solve for x

1. Solve the following equations:

|  |  |
| --- | --- |
| **Teacher** | **Your Turn** |
| $$3x+2+5x+7=49$$ | a) $-12=-22-x+2-3x$ | b) $6x^{2}+1-x^{2}+5+3x^{2}=206$ |

2. Solve and check the following equation.

 $10x-12-3x=10-1$

**PRACTICE**

1. Solve the following equations:

|  |  |
| --- | --- |
| a) $5\left(3x+1\right)=35$ | b) $3\left(4x-3\right)=-69$ |
| c) $3\left(4x^{2}-5\right)=33$ | d) $2\left(8+2x^{2}\right)=212$ |

2. Solve each of the following equations:

|  |  |
| --- | --- |
| a) $12x+4-5x+1=19$ | b) $x+9+4x=-31$ |
| c) $7x^{2}+11-2x^{2}+x^{2}-4=61$ | d) $14=9x+15-7x-1$ |

3. Solve each of the following equations. Complete the maze by following your answers in order.



|  |  |  |
| --- | --- | --- |
| a) $x^{2}-40=129$ | b) $9x+25=34$ | c) $\frac{x}{2}+33=37$ |
| d) $2\left(x-5\right)=-16$ | e) $4\left(3x-1\right)=80$ | f) $20=5\left(4+2x\right)$ |
| g) $11\left(x-2\right)=22$ | h) $2\left(x+8\right)=38$ | i) $5x+3-x-2=41$ |
| j) $3x-14-2x=9$ | k) $-7x+18+3x=-30$ | l) $–y+18+6y=43$ |
| m) $5\left(x+1\right)+3\left(3-x\right)=42$ | n) $13\left(x+2\right)+2\left(7-6x\right)=65$ |
| o) $5x+14-3x-10-x=21$ | p) $-9+7x^{2}+41-5x^{2}-10=822$ |