**You must show work/explain EVERY question, even the multiple choice questions.**

1. When 36 is subtracted from the square of a number, the result is five times the number. What is the positive solution?

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | 9 | 3) | $$3$$ |
| 2) | 6 | 4) | $$4$$ |

1. \_\_\_\_\_\_\_\_

 2.) What is the solution for the equation $2\left(x-4\right)-2=2x-10$?

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | 1 | 3) | $$-\frac{1}{2}$$ |
| 2) | All Real Numbers | 4) | There is no solution |

1. \_\_\_\_\_\_\_\_

 3.) Solve for *x*: 

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | 8 | 3) | 13 |
| 2) | 15 | 4) | 23 |

3.) \_\_\_\_\_\_\_\_\_

4.) When Albert flips open his mathematics textbook, he notices that the product of the page numbers of the two facing pages that he sees is 156. Which equation could be used to find the page numbers that Albert is looking at?

|  |  |  |  |
| --- | --- | --- | --- |
| 1) |  | 3) |  |
| 2) |  | 4) |  |

 4.) \_\_\_\_\_\_\_\_\_

 5.) Solve for b given the formula for the area of a triangle, $A=\frac{1}{2}bh$

|  |  |  |  |
| --- | --- | --- | --- |
| 1) | $$b=\frac{h}{2A}$$ | 3) | $$b=\frac{Ah}{2}$$ |
| 2) | $$b=\frac{2A}{h}$$ | 4) | $$b=\frac{A}{2h}$$ |

5.) \_\_\_\_\_\_\_\_\_\_

 6.) Solve **AND** check for x: $\frac{3x+3}{3}=\frac{7x-1}{5}$ CHECK

What are the solution(s) to this equation? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What type of function is the equation? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7.) Solve **AND** check for x: $\frac{x}{3}=\frac{x^{2}-2x}{3}$ CHECK

What are the solution(s) to this equation? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 What type of function is the equation? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_