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| Homework 1.1 |

Fundamental Skills

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| 1. | Name property demonstrated | | 2. | Identify the sets of numbers the given number belongs. | |
|  | **a)** | x + y = x + y |  | **a)** |  |
|  | **b)** | 2(x – 1) = 2x – 2 |  | **b)** |  |
|  | **c)** | x(yz) = (yz)x |  | **c)** |  |
|  | **d)** | x + (-x) = 0 |  | **d)** | ½ |
|  | **e)** | 5(1) = 5 |  | **e)** |  |
|  | **f)** | 2( ½ ) = 1 |  | **f)** |  |
|  | **g)** | (x + y) + z = x + (y + z) |  | **g)** |  |

**Solve the following literal equations for x.**

3.  4. 

**Translate and solve the following verbal statements.**

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| 5. | 14 less twice the difference of m and 8 is 24. Find the value of m. | 6. | 20 less than 5 times the difference of 18 and m is 48. Find the value of m. |

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| 7. | Twice the difference of m and 8 is 14 less triple the sum of m and 8. Find the value of m. | 8. | 12 less triple m is 4 more than 5 times the difference of m and 10. Find the value of m. |

**Applications**

**Write a linear equation to solve the following.**

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| 9. | The perimeter of a rectangle is 30 cm. If the length is 3 more than twice the width,  **a)** Find the dimensions of the rectangle  **b)** Find the area of the rectangle. | 10. | Josh and Pattie have bought an older home that needs repair. They budgeted a total of $1685 for home improvements, they start spending $425 on small improvements. They would like to replace six interior doors next. What is the maximum they can spend per door? |

**Common Core Exam Prep**

**Show your work algebraically and select the correct multiple choice value.**

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| 11. | If find | 12. | John and Morgan go bowling with $16.75 to spend. Shoe rental is $1.50 and it is $2.50 per game. Write a linear equation for the cost C given games played x and find the total number of games they can play? |
| A | -2 | A | C(x) = 1.50x + 2.50, 4 games |
| B | 16 | B | C(x) = 3.00x + 5.00, 5 games |
| C | -4 | C | C(x) = 5.00x + 3.00, 2 games |
| D | 32 | D | C(x) = 2.50x + 1.50, 6 games |