Math 10 Polynomials & Factoring Assignment Total: /28 = %
Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Use algebra tiles to multiply the following. /2

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| --- |
| 1. $(x-4)(2x+3) $
 |

1. Use the distributive property to expand and simplify the following. /8 *2 marks each*

|  |  |
| --- | --- |
| 1. $\left(x-4\right)\left(2x+3\right)=$
 | 1. $\left(2x+5\right)\left(3x-2\right)=$
 |
| 1. $\left(3x+2\right)\left(x^{2}-2x+5\right)=$
 | 1. $\left(x-2\right)^{2}+3x\left(x-2\right)=$
 |

1. A circle is inset into a square with a side length of $6x+4$, as shown. Write an expression to represent the area of the circle. Then multiply and simplify. $A =πr^{2}$ /2

6x +4



1. What is the greatest common factor for each set of terms /2

|  |  |
| --- | --- |
| 1. $8x^{2}y^{2} and 24 x^{3}y^{3} $

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 1. $14p^{4}q^{5}, -24p^{5}q^{3}and 7p^{3}q^{4}$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

D. Draw in the factors as tiles for the following algebra tile models and label with expression above. /2

|  |  |
| --- | --- |
| 9.  | 10. |

1. Completely Factor the Following. **Remove GCF first!** /10

|  |  |
| --- | --- |
| 11. $ 8x+24y=$ | 12. $4x^{3}-8x^{2}+12x=$ |
| 13. $4x\left(x+3\right)-5\left(x+3\right)=$ | 14. $8x^{2}+12xy-6x-9y=$ |
| 15. $12a^{2}-25a+2=$ | 16. $16x^{2}+36x+20$= |
| 17. $36m^{2}-196n^{4}=$ | 18. $16m^{3}n^{2}+24mn^{4}-8mn^{2}=$ |
| 19. $9k^{2}+3k+\frac{1}{4}=$ | 20. $3a^{2}+39a-90=$ |
| 21. For what integer value**s** of k can the following trinomial be factored? /2 $$4x^{2}+kx-5 $$ |