

I. Determining Degree**State the degree of each polynomial.**

1. $3x^2y + 2xyz^3 - 5x^3 + y^4$

2. $\underline{abc} + 6a^2b - 4ab^2 - 10$

3. 8

4. $8xyz^5 - 7x^2y^4z + xyz - 4x$



II. Adding/Subtracting Polynomials

5. $(5x^2y + 6xy - 3xy^2) + (2xy - 10x^2y + 2xy^2)$

6. $(7m^3 + 5m^2 - 8m + 3) - (10m^3 + 3m^2 - 8m - 3)$

$$\begin{array}{r}
 5x^2y - 10x^2y \\
 -5x^2y + 6xy + 2xy \\
 -5x^2y + 8xy - xy^2
 \end{array}$$

$$\begin{array}{r}
 7m^3 + 5m^2 - 8m + 3 \\
 -10m^3 - 3m^2 + 8m + 3 \\
 -3m^3 + 2m^2 + 6
 \end{array}$$



10. $3xy^2(4xy^3 + xy + 2)$

11. $(x + 6)(2x - 3)$

$$12x^2y^5 + 3x^2y^3 + 6xy^2$$

$$2x^2 - 3x + 12x - 18$$

$$2x^2 + 9x - 18$$



$$13. \underline{(2x - 7)^2}$$

$$x^2 = x \cdot x$$

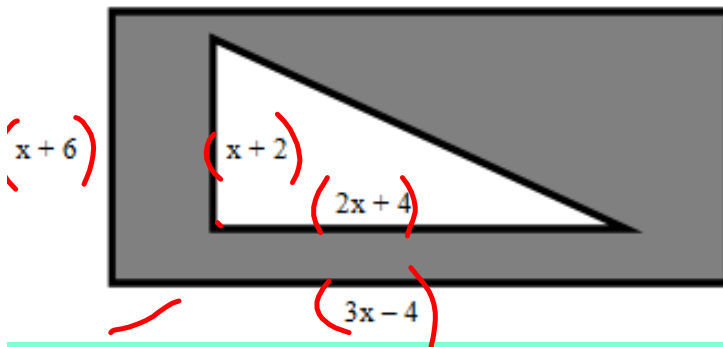
$$(2x-7)(2x-7)$$

$$4x^2 - 14x - 14x + 49$$

$$4x^2 - 28x + 49$$



area of the shaded region below? (Area of rectangle = Lw Area of triangle = $\frac{1}{2}bh$)

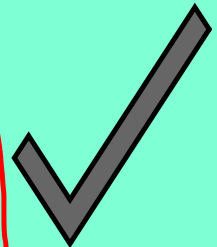


$$3x^2 + 14x - 24 - (x^2 + 4x + 4)$$

$$2x^2 + 8x + 8$$

$$x^2 + 4x + 4$$

$$2x^2 + 10x - 28$$



by pulling out the GCF. Circle your final answer

2. $5x - 10x^2$

$5x(-2x+1)$

3. $d^4 - d^3 - d^2$



4. $6x^3 - 2x^2 + 2x$

5. $3m^5 - 12m^2$

6. $4y^2 + 4y + 8$

$$6x^3 - 2x$$



10. $4x^2 - 1$

11. $25y^2 - 9$

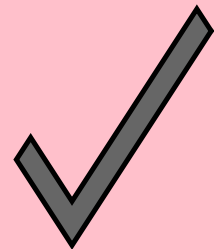
12. $100a^2 - 16$



13. $x^2 - 5x - 14$

14. $x^2 + x - 42$

15. $x^2 + 8x + 15$



22. $10x^2 - 2x - 8$

23. $24x^2 + 2x - 1$

24. $8x^2 + 26x + 15$

$$10x^2 - 2x - 8$$

$$2(5x^2 - x - 4)$$

~~$$\begin{array}{r} -20x^2 \\ -5x \quad 4x \\ -x \end{array}$$~~

$$(5x^2 - 5x)(4x - 4)$$

$$5x(x-1) + 4(x-1)$$

$$2(x-1)(5x+4)$$



$$20. 4x^2 + 11x + 6$$



