***GR 10 REVISION: PRODUCTS***

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| --- |
| Simplify: |
|  |  |  |  |  |  |
| 1. |  |  | 2. |  |  |
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| 3. |  |  | 4. |  |  |
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| 5. |  |  | 6. |  |  |
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| 7. |  |  | 8. |  |  |
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| 9. |  |  |  |  |  |
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| 10. |  |  |

***ANSWERS***

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| --- | --- | --- | --- |
| 1. | $$=-2a^{3}+6a^{2}b$$ | 2. | $$=a^{4}+8a^{2}b+16b^{2}$$ |
|  |  |  |  |  |  |
| 3. | $$=\frac{4}{x^{2}}-9$$ | 4. | $$=x^{2}+xy-6y^{2}-\left(x^{4}-4x^{2}y+4y^{2}\right)+x^{2}y+3xy^{2}$$$$=x^{2}+xy-6y^{2}-x^{4}+4x^{2}y-4y^{2}+x^{2}y+3xy^{2}$$$$=x^{2}+xy-10y^{2}-x^{4}+5x^{2}y+3xy^{2}$$ |
|  |  |  |  |  |  |
| 5. | $$=x^{3}-6x^{2}+7x+2+4x^{2}-4x+1$$$$=x^{3}-2x^{2}+3x+3$$ | 6. | $$=x^{6}+8b^{3}$$ |
|  |  |  |  |  |  |
| 7. | $$=\left(x^{6}-8\right)\left(x^{6}+8\right)$$$$=x^{12}-64$$ | 8. | $$=\left[\left(p-q\right)^{2}-16\right]$$$$=p^{2}-2pq+q^{2}-16$$ |
|  |  |  |  |  |  |
| 9. | $$=-2x\left(x^{2}-4xy+4y^{2}\right)-\left(2x^{2}-5xy+3y^{2}\right)-2$$$$=-2x^{3}+8x^{2}y-8xy^{2}-2x^{2}+5xy-3y^{2}-2$$ |
|  |  |  |  |  |  |
| 10. | $$=\frac{x^{3}}{8}-27y^{3}-\frac{x}{2}\left(\frac{x^{2}}{4}-9y^{2}\right)$$$$=\frac{x^{3}}{8}-27y^{3}-\frac{x^{3}}{8}+\frac{9}{2}xy^{2}$$$$=-27y^{3}+\frac{9}{2}xy^{2}$$ |