Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_

**Review for Algebra Test: Section 1 – Expressions**

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| 1. $For 6y-3y^{3}+9y^{2}$
2. Write the expression in standard form
3. State the number of terms
4. What is the leading coefficient?
5. Name the polynomial based upon its number of terms.
6. What is the degree of the expression?
 | 1. Simplify completely:
2. $\frac{6^{x}∙6^{y}}{6^{4}}$
3. $(-2x^{2}y)(4x^{5}z)^{2}$
4. $\frac{3x^{8}y^{6}}{21x^{5}y^{7}}$

  |
| 1. $State the degree of 9x^{8}yz^{3}$
 | 1. Which property is demonstrated?
2. (3x + 4) + 2y = 3x + (4 + 2y)
3. (3x + 4) + 2y = (4 + 3x) + 2y
4. 12x – 9 = 3(4x – 3)
 |
| 1. Write an expression to represent the perimeter of a square whose side

 is (3x – 2). |
| 1. Simplify completely:

 $$a. \left(7x-3y+10\right)+(3x-6y-3)$$$$b. \left(x-8y+5\right)-(2x+y-3)$$$$c. \left(-6x+12\right)-(2x+3y+4)$$ | 1. Casey and his friend, Clark, are training for a 5K run. Casey runs 3 times a week and Clark runs 4 times a week.
2. Write expressions to represent the number of times each person has ran after ***w,*** weeks.
3. Write an expression to represent the total number of times they run together after w, weeks.
4. In 6 weeks, what is the total number of runs taken by Casey and Clark?
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| 1. Rewrite a simplified equivalent expression for each of the following:
2. $5(3x^{2}+2x-7)$
3. $(3x-9)(2x+4)$
4. $(4x-7)(2x^{2}+3x-1)$
 | 1. Simplify completely. Convert all answers to radical form.
2. $4\sqrt{24}+3\sqrt{6}-2\sqrt[3]{16}$
3. $\frac{12\sqrt{18}}{\sqrt{2}}$
4. $x^{\frac{1}{3}}(x^{\frac{1}{4}})$
5. $2(12)^{\frac{1}{2}}+4(50)^{\frac{1}{2}}$
 |
| 10. Select all that are equivalent to$2x^{\frac{2}{3}}$1. $2(\sqrt[3]{x})^{2}$
2. $(2+\sqrt[3]{x})^{2}$
3. $2x^{3}(x^{\frac{2}{9}})$
4. $2x^{\frac{1}{6}}x^{\frac{1}{2}}$
 |
| 1. Provide an example for each of the following situations:
2. The product of a two irrational numbers equals an irrational number
3. The product of two irrational numbers equals a rational number
4. The sum of two irrational numbers equals an irrational number
5. The sum of two irrational numbers equals a rational number
6. The sum of rational and an irrational number equals an irrational number
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