

Assignment 3

Here is a mixture of multiplying and distributing problems. These are similar to what you may see on the next test.

1. $5x(x^2 - xy + 3y^2)$

2. $2xy^2 \cdot yz^2 \cdot -xz$

3. $-x^2y(x^4y - yz + xz)$

4. $2xy^2(x^2 + 3xy - 1)$

5. $(-ab^2)(-a^2b)(a^3c^2)$

6. $-4xy^2z^3(2xy^3 - 3x^2z^2 + y)$

7. $(-2xz)(3xy^2)(-y^3z)$

Factor using the greatest common factor.

1. $8x + 4x^3$

2. $2x^4 + 3x^3 - 5x^2$

3. $12ab^3 - 3a^2b^2$

4. $15x^3 - 20$

5. $4xy^3 - 6x^2 + 8x^3y$

6. $3x^2y^6 - 12x^3y^2 - 15xy^3$

Name: _____

Simplify each monomial using the powers to powers rule.

1. $(3x^3)^2$

2. $(2x^5y^2)^3$

3. $(5a^3bc^4)^2$

4. $4x(x^3y)^3$

5. $(3x^3y)^3(yz^2)$

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

FOIL Practice

Multiply the expressions using FOIL.

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

2. $(x+4)(3x-5)$

3. $(2x+3)(5x-3)$

4. $(x-6)(x-6)$

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

6. $(2x-1)(3x+4)$

Proportional Word Problems

Solve these word problems by writing and solving a proportion.

1. A man received \$120 for working 8 hours. How much would he receive for working 14 hours at the same rate of pay?

2. If 3 apples cost \$1.23, find the cost of 17 apples at the same rate.

3. If beans are being sold for at the rate of 3 cans for \$1.65 how many cans can be bought for \$4.95?

4. A 40-acre field yields 600 bushels of wheat. At the same rate what will a 75-acre field yield?

Getting ready to Solve Quadratics.

Find two numbers that:

1. Multiply to 24 and add to 10 _____ , _____

2. Multiply to -24 and add to 2 _____ , _____

3. Multiply to 24 and add to -11 _____ , _____

4. Multiply to -24 and add to -5 _____ , _____

5. Multiply to 24 and add to +25 _____ , _____

Find two numbers that multiply to the last term and add to the middle term.

6. $x^2 + 9x + 18$

7. $x^2 + 7x - 18$

8. $x^2 + 7x + 6$

9. $x^2 + 5x + 6$

10. $x^2 - 5x - 6$

11. $x^2 + 8x - 20$