

Name _____
Date _____ BIL _____

Vocabulary review –

The greatest common factor (GCF) of a set of numbers is the largest factor that all the numbers share. For example, 12, 20, and 24 have two common factors: 2 and 4. The largest is 4, so we say that the GCF of 12, 20, and 24 is 4. GCF is often used to find common denominators. Jul 24, 2013

What does factored mean in algebra?

Factoring: Finding what to multiply together to get an expression. It is like "splitting" an expression into a multiplication of simpler expressions.

Factoring using many techniques, Part 1

Factor out GCFs.

1) $9r^3 + 30r - 15$

2) $-21n^3 + 28n^2 + 35n$

3) $24x^4 - 6x^3 + 12x^2 - 24x$

4) $18 + 4b^2$

Factor by grouping.

5) $6x^3 - 3x^2 - 14x + 7$

6) $18v^3 - 48v^2 + 15v - 40$

7) $4b^3 + 10b^2 + 14b + 35$

8) $35n^3 + 25n^2 - 28n - 20$

Factor by AC method.

9) $x^2 + 4x - 45$

10) $x^2 - 14x + 40$

11) $7a^2 + 31a + 12$

12) $5a^2 - 6a + 1$

Factor using Difference of Squares.

13) $x^2 - 9$

14) $9p^2 - 4$

15) $9x^2 - 1$

16) $x^2 - 1$

Factor using Sum of Squares

17) $4a^4 + 9$

18) $x^4 + 25$

19) $16k^4 + 9$

20) $x^4 + 9$

Factoring using many techniques, Part 2

Factor using Difference of Cubes

1) $1 - 27x^3$

2) $u^3 - 64$

3) $216m^3 - 125$

4) $64u^3 - 27$

Factor using Sum of Cubes

5) $8x^3 + 27$

6) $64x^3 + 1$

7) $125a^3 + 64$

8) $x^3 + 8$

Factoring using many techniques, Part 2

Factor using sum of cubes.

1) $8x^3 + 27$

2) $27x^3 + 1$

3) $125 + a^3$

4) $64u^3 + 27$

Factor using difference of cubes.

5) $8x^3 - 125$

6) $27a^3 - 64$

7) $125 - 27x^3$

8) $125 - 64x^3$

You try to factor _____.

Factor each completely.

1) $x^3 + 8$

2) $3m^3 - 24$

3) $4k^2 - 8k + 4$

4) $9x^2 - 16$

5) $3x^4 - 36x^2 + 105$

6) $7x^4 - 39x^2 - 18$

7) $5n^2 - 55n + 150$

8) $12m^2 + 80m + 100$

9) $25v^3 - 40v^2 - 30v + 48$

10) $2m^3 - 5m^2 - 12m + 30$