

Bell Ringer

Wednesday 9/18

Simplify the Expression

1. $(3a^2)^4$

$$3^4 a^2 = 81a^2$$

3. $(m^3)^{-1} \left(x^{\frac{1}{3}}\right)^{\frac{1}{4}}$

$$\frac{m^{-3} x^{\frac{1}{12}}}{1} = \frac{x^{\frac{1}{12}}}{m^3}$$

2. $(b^{\frac{2}{3}} \cdot c^{\frac{2}{5}})(b^{\frac{4}{9}} \cdot c^{\frac{9}{10}}) = b^{\frac{10}{9}} c^{\frac{13}{10}}$

4. $\left(\frac{1}{3y^2}\right)^{-3}$
SKIP

All Ch 1 HW due TOMORROW!!!

Standards 1A and 1B
Retakes due FRIDAY!!!

Correct GCF ws


Math 2

Name _____ ID: 1

Factoring out the GCF

Date _____ Period _____

Factor the greatest common factor out of each expression.

 1) $15v - 10$


$5(3v - 2)$

2) $4m^3 + 5m^2$

$m^2(4m + 5)$

3) $20k^2 + 15k$

$5k(4k + 3)$

 4) $n^3 + n^2$

$n^2(n + 1)$

5) $-4x^3 + 8$


$4(-x^3 + 2)$

6) $12p^3 + 3p$


$3p(4p^2 + 1)$

7) $-4x^2 - 20x$

$-4x(x + 5)$

 8) $4k - 3k^2$

$k(4 - 3k)$

 9) $12 + 6p^4 + 14p$

$2(6 + 3p^4 + 7p)$

10) $15x^3 - 6x + 3$

$3(5x^3 - 2x + 1)$

$$\text{😊 11) } 12a^3 - 12a^2 + 21a$$
$$3a(4a^2 - 4a + 7)$$

$$12) -70y^5 - 63yx^3 - 56y^3$$
$$-7y(10y^4 + 9x^3 + 8y^2)$$

$$13) -100u^3v^3 + 80uv^2 - 90u^2$$
$$10u(-10u^2v^3 + 8v^2 - 9u)$$

$$14) -80v^2u^4 - 20v^3 - 50v^2$$
$$-10v^2(8u^4 + 2v + 5)$$

$$15) 5x^7y^2 - 10x^2y^3 + 5xy$$
$$5xy(x^6y - 2xy^2 + 1)$$

$$\text{😊 16) } 40x^2y + 72xy$$
$$8xy(5x + 9)$$

$$17) 80ab^4 - 10a^3b - 10a^3 + 20a^2$$
$$10a(8b^4 - a^2b - a^2 + 2a)$$

$$\text{😊 18) } 12x^3y^4 + 18x^2$$
$$6x^2(2xy^4 + 3)$$

$$19) -25x^4y^2 - 45xy$$
$$-5xy(5x^3y + 9)$$

$$\text{😊 20) } 16n^2 - 18n^3m^3$$
$$2n^2(8 - 9m^3n)$$

WHITEBOARD PARTNER PRACTICE!

Factor Completely

1)

$$40b + 10 = 10(4b + 1)$$

Factor Completely

2)

$$3x^2 - 10x = x(3x - 10)$$

Factor Completely

3)

$$10\underline{x}y\underline{z} - 15\underline{x}\underline{z} =$$
$$5xz(2y - 3)$$

Factor Completely

4)

$$14x^3 - 35x^2 + 28 =$$
$$7(2x^3 - 5x^2 + 4)$$

Factor Completely

5)

$$2x^2y^2 - 4xy =$$
$$2xy(xy - 2)$$

Factor Completely

6)

$$2x^5 - 10x^3 + 4x^2 =$$
$$2x^2(x^3 - 5x + 2)$$

Factor Completely

7)

$$14z^4 - 42z^3 + 21z =$$
$$7z(2z^3 - 6z^2 + 3)$$

Factor Completely

8)

$$9x^6 + 15x^4 + 12x^2 =$$
$$3x^2(3x^4 + 5x^2 + 4)$$

Pass in whiteboards, markers and erasers
Pull out notes..

What about something like this?!

Can you factor anything out of all four terms??

$$\begin{aligned} & \underline{8t^3 + 14t^2} + \underline{20t + 35} \\ & \underline{2t^2(4t + 7)} + \underline{5(4t + 7)} \\ & (4t + 7)(2t^2 + 5) \end{aligned}$$

Can you factor anything out of all four terms??

$$\underline{2xy + 6x} + \underline{y^2 + 3y}$$

$$\underline{2x}(y + 3) + \underline{y}(y + 3)$$

$$(y + 3)(2x + y)$$

$$(2x + y)(y + 3)$$

Can you factor anything out of all four terms??

$$\begin{aligned} & \underline{18h^3 + 45h^2} \quad \underline{-8h - 20} \\ & 9h^2(\underline{2h+5}) - 4(\underline{2h+5}) \\ & (\underline{2h+5})(9h^2 - 4) \end{aligned}$$

Can you factor anything out of all four terms??

$$\begin{aligned} & \underline{35a^3 - 7a^2} + \underline{5a - 1} \\ & 7a^2(5a - 1) + 1(5a - 1) \\ & (5a - 1)(7a^2 + 1) \end{aligned}$$

Can you factor anything out of all four terms??

$$12n^3 - 48n^2 + 8n - 32$$
$$4(\underline{3n^3 - 12n^2} + \underline{2n - 8})$$
$$4(3n^2(\underline{n-4}) + 2(\underline{n-4}))$$
$$4(n-4)(3n^2+2)$$

due Friday

Math 2

Name _____

Factor by Grouping

Date _____ Period _____

Factor each completely.

1) $25v^3 - 15v^2 + 5v - 3$

2) $4x^3 + x^2 + 8x + 2$

3) $10p^3 - 25p^2 + 6p - 15$

4) $20n^3 - 4n^2 + 15n - 3$

5) $3m^3 - 9m^2 + 2m - 6$

6) $r^3 + 5r^2 + 3r + 15$

7) $12x^3 + 4x^2 + 9x + 3$

8) $5b^3 - 10b^2 + b - 2$

9) $2k^3 - 4k^2 + k - 2$

10) $20n^3 - 5n^2 + 16n - 4$

11) $xy - 6x - 6y + 36$

12) $147xy - 126x + 105y - 90$

13) $7ab + 6a^2 + b^2$

14) $56mn - 8m + 35n - 5$

15) $2xy + 6x + y^2 + 3y$

16) $25mn - 30m^2 - 15n + 18m$

17) $6v^3 - 48v^2$

18) $3r^2 - 3r$

19) $2m^3 - 20m^2$

20) $6a^3 + 36a^2$

Math 2A Section 2.8

Name _____

Factor by Grouping

Date _____ Period _____

Factor each completely.

1) $25v^3 - 15v^2 + 5v - 3$

$$(5v^2 + 1)(5v - 3)$$

2) $4x^3 + x^2 + 8x + 2$

$$(x^2 + 2)(4x + 1)$$

3) $10p^3 - 25p^2 + 6p - 15$

$$(5p^2 + 3)(2p - 5)$$

4) $20n^3 - 4n^2 + 15n - 3$

$$(4n^2 + 3)(5n - 1)$$

5) $3m^3 - 9m^2 + 2m - 6$

$$(3m^2 + 2)(m - 3)$$

6) $r^3 + 5r^2 + 3r + 15$

$$(r^2 + 3)(r + 5)$$

7) $12x^3 + 4x^2 + 9x + 3$

$$(4x^2 + 3)(3x + 1)$$

8) $5b^3 - 10b^2 + b - 2$

$$(5b^2 + 1)(b - 2)$$

9) $2k^3 - 4k^2 + k - 2$

$$(2k^2 + 1)(k - 2)$$

10) $20n^3 - 5n^2 + 16n - 4$

$$(5n^2 + 4)(4n - 1)$$

11) $xy - 6x - 6y + 36$

$$(x - 6)(y - 6)$$

12) $147xy - 126x + 105y - 90$

$$3(7x + 5)(7y - 6)$$

13) $7ab + 6a^2 + b^2$

$$(a + b)(b + 6a)$$

14) $56mn - 8m + 35n - 5$

$$(8m + 5)(7n - 1)$$

15) $2xy + 6x + y^2 + 3y$

$$(2x + y)(y + 3)$$

16) $25mn - 30m^2 - 15n + 18m$

$$(5m - 3)(5n - 6m)$$

17) $6v^3 - 48v^2$

$$6v^2(v - 8)$$

18) $3r^2 - 3r$

$$3r(r - 1)$$

19) $2m^3 - 20m^2$

$$2m^2(m - 10)$$

20) $6a^3 + 36a^2$

$$6a^2(a + 6)$$

