

DAY 1 - Review Exponent Laws & Finding LCD & GCF

Multiply.

5) $2n^4 \cdot 5n^4$ $10n^8$

6) $6r \cdot 5r^2$ $30r^3$

7) $2n^4 \cdot 6n^4$ $12n^8$

8) $6k^2 \cdot k$ $6k^3$

9) $5b^2 \cdot 8b$ $40b^3$

10) $4x^2 \cdot 3x$ $12x^3$

11) $6x \cdot 2x^2$ $12x^3$

12) $6x \cdot 6x^3$ $36x^4$

13) $7v^3 \cdot 10u^3v^5 \cdot 8uv^3$ $560u^4v^4$

14) $9xy^2 \cdot 9x^3y^2$ $81x^4y^4$

Divide.

1) $\frac{5^4}{5} = 5^3 = 125$

2) $\frac{3}{3^3} = 3^{-2} = \frac{1}{3^2} = \frac{1}{9} = 0.\overline{11}$

3) $\frac{2^2}{2^3} = 2^{-1} = 0.5$ or $\frac{1}{2}$

4) $\frac{2^4}{2^2} = 2^2 = 4$

5) $\frac{3r^3}{2r} = \frac{3r^2}{2}$

6) $\frac{7k^2}{4k^3} = \frac{7k^{-1}}{4}$ or $\frac{7}{4k}$

7) $\frac{10p^4}{6p} = \frac{5p^3}{3}$

8) $\frac{3b}{10b^3} = \frac{3b^{-2}}{10}$ or $\frac{3}{10b^2}$

9) $\frac{8m^3}{10m^3} = \frac{4}{5}$

10) $\frac{7n^3}{2n^5} = \frac{7n^{-2}}{2}$ or $\frac{7}{2n^2}$

Power of Power.

1) $(3a^2)^3$ $27a^6$

2) $(2n^4)^4$ $16n^{16}$

3) $(3x^4)^4$ $81x^{16}$

4) $(6b^2)^2$ $36b^4$

5) $(7y^4)^2$ $49y^8$

6) $(3ab^4)^4$ $81a^4b^{16}$

7) $(2x^4y^4)^3$ $8x^{12}y^{12}$

8) $(5mn^3)^3$ $125m^3n^9$

9) $(x^2y^2)^4$ x^8y^8

10) $(6yx^4)^2$ $36y^2x^8$

Find Lowest Common Denominator.

Numbers	Multiples	Lowest Common Multiple
4 3	4, 8, (12) 3, 6, 9, (12)	12
10 11	10, 20, 30, 40, 50 11, 22, 33, ...	110
7 4		28
6 9		18
8 7		56

Find Greatest Common Factor.

Numbers	Factors	Greatest Common Factor
51 24	1 (3) 51 17 1 2 3 4 24 12 8 6	3
75 44	1 3 5 75 25 15 1 2 4 44 22 11	1
40 55		5
20 64		4
75 81		3

DAY 1 cont'd - Simplifying & Evaluating Polynomials

Simplify

a) $4 + 4r - z + 3r + 5z - 2$

$2 + 7r + 4z$

c) $2 + 3r - 5 + r$

$-3 + 4r$

e) $k - 5t - 6k + 2t$

$-5k - 3t$

g) $3x - y + z - 2y + 3x - 7y - 7z + 2y$

$6x - 8y - 6z$

b) $7y - 3 + 2y$

$9y - 3$

d) $3x + 3y - 2x + 4$

$x + 3y + 4$

f) $4t - (-2t) + (4 - 7t) + 7 - 7t + 11$

$4t + 2t + 4 - 7t + 7 - 7t + 11$
 $-8t + 22$

h) $3q - 2p + 4 - 5 + 6p - 2q - (-3q)$

$4p - 1 + 4q$

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Expand and simplify

a) $3(x + 2)$

$3x + 6$

c) $8(4 - p) - 3(p + 5)$

$32 - 8p - 3p - 15$
 $-11p + 17$

e) $-2(e - 7) - 4(-3e + 5)$

$-2e + 14 + 12e - 20$
 $10e - 6$

b) $2(q + 3) + 11q$

$2q + 6 + 11q$
 $13q + 6$

d) $5(k - 1) + 3(2k - 2)$

$5k - 5 + 6k - 6$
 $11k - 11$

f) $4(3k + 7) - 2(2 - 4k)$

$12k + 28 - 4 + 8k$
 $20k + 24$

/8

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

$2yx - 6y + 12z - 4zx$
can't collect.

4. $2x(x + 7) + 3(x + 7)$

$2x^2 + 14x + 3x + 21$
 $2x^2 + 17x + 21$

Evaluate each expression for $x = 2$ and $y = -1$.

5. a) $4x + 3y$

$$4(2) + 3(-1)$$

$$8 - 3$$

$$5$$

c) $2x + 3y$

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

$$4 - 3$$

$$1$$

e) $xy - xy + 2x - 2y + 3xy$

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

$$4 + 2 - 6$$

$$0$$

b) $-7y$

$$-7(-1)$$

$$7$$

d) $2xy + 3yx - y$

$$5xy - y$$

$$5(2)(-1) - (-1)$$

$$-10 + 1 = -9$$

f) $\frac{3x+y}{5} + \frac{2x+y}{2}$

$$\frac{3(2)+(-1)}{5} + \frac{2(2)+(-1)}{2}$$

$$\frac{5}{5} + \frac{3}{2}$$

$$1 + 1.5 = 2.5$$

Evaluate each expression for $x = -3$.

6. a) $4x + 3$

$$4(-3) + 3$$

$$-12 + 3$$

$$-9$$

c) $-6 - x$

$$-6 - (-3)$$

$$-6 + 3$$

$$-3$$

e) $14x - 4$

$$14(-3) - 4$$

$$-42 - 4$$

$$-46$$

b) $-2x + 7$

$$-2(-3) + 7$$

$$6 + 7$$

$$13$$

d) $2 - 1.5x$

$$2 - 1.5(-3)$$

$$2 + 4.5$$

$$6.5$$

f) $\frac{1}{2}x + \frac{3}{2}$

$$\frac{1}{2}(-3) + \frac{3}{2}$$

$$-1.5 + 1.5$$

$$0$$