

Concept: Dividing Expressions

Name: _____

COMPUTER COMPONENT

Instructions: In  follow the **Content Menu** path:

Algebra > Dividing Expressions



Work through all Sub Lessons of the following Lessons **in order**:

- *Dividing a Monomial by a Monomial*
- *Dividing a Polynomial by a Monomial*
- *Dividing a Polynomial by a Binomial*
- *Combination Questions*



As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal

OFF COMPUTER EXERCISES

1. Find the answer to $\frac{32}{4}$ by re-writing 32 as $16 + 6 + 10$ and then dividing each term.

2. Simplify.

(a) $\frac{12a^3b^2}{48a^2b}$

= _____

(b) $\frac{-12cd}{64c^2d}$

= _____

(c) $\frac{-55m^5n^4}{11m^6n^2}$

= _____

(d) $-\frac{14p^4q^3r^5}{16p^3r^5}$

= _____

(e) $\frac{2w^8x^3yz^5}{4w^5x^8yz^9}$

= _____

3. Rewrite your answers in 2(b), 2(c) and 2(d) with variables in the numerator.

2(b) _____

2(c) _____

2(d) _____

4. Circle 'true or false'.

- | | | |
|--|------|-------|
| (a) When dividing a polynomial by a monomial, we can separate the fraction into a number of separate fractions and add the result. | true | false |
| (b) Another method used to divide a Polynomial by a monomial is to common factor the denominator, then divide through by like terms. | true | false |
| (c) Long division can be used when dividing a polynomial by a binomial. | true | false |

5. Simplify.

(a) $\frac{3x - 6xy + 9x}{3x}$

= _____

(b) $\frac{5a^2 - 55a + 40a^3}{5a}$

= _____

(c) $\frac{-8m^2n + 6mn - 10m}{2m}$

= _____

(d) $\frac{-35pq^4 + 7p^2q^2 - 21p^3q^2}{-7pq^2}$

= _____

6. Simplify. Remember that you will have to use either factoring **OR** long division in order to answer these questions. You may need an extra piece of paper for your work.

(a) $\frac{x^2 - 64}{x - 8}$

= _____

(b) $\frac{x^2 - 5x + 6}{(x - 2)}$

= _____

(c) $\frac{4x^2 - 5x + 8}{x - 2}$

= _____

(d) $\frac{x(x^2 + x - 12)}{x^2 + 4x}$

= _____

(e)
$$\frac{6x^2 + x - 11}{x + 4}$$

= _____

(f)
$$\frac{10x^2 - 5x - 1}{(x + 5)}$$

= _____

7. Simplify.

These questions will cover all of the skills that you learned in this section.

(a)
$$\frac{-24k^6}{28k^6}$$

= _____

(b)
$$\frac{1}{4x} + \frac{5}{8x}$$

= _____

(c)
$$\frac{(x^2 - 64)(3x)}{(x^2 - 8x)}$$

= _____

(d)
$$\frac{4x^2 - 10x + 11}{x - 6}$$

= _____

(e)
$$\frac{8x}{3x - 9} \times \frac{12x - 9}{16x}$$

= _____

(f)
$$\frac{6x}{x^2 - 25} + \frac{2}{x + 5}$$

= _____