

Arithmetic with Polynomials - Worksheet 6

Answer Key

Write the following polynomial quotients in the form $q(x) + \frac{r(x)}{b(x)}$.

1. $\frac{x^2 + 2x - 35}{x - 5}.$

$x + 7.$

6. $\frac{3x^3 + 5x^2}{x + 1}.$

$3x^2 + 2x - 2 + \frac{2}{x+1}.$

2. $\frac{x^3 + 6x^2 - 8}{x^2 - 1}.$

$x + 6 + \frac{x-2}{x^2-1}.$

7. $\frac{-x^3 + 3x}{x - 2}.$

$-x^2 - 2x - 1 - \frac{2}{x-2}.$

3. $\frac{3x^4 + 4x^3 - 2x^2 + x - 3}{x - 5}$

$3x^3 + 19x^2 + 93x + 466 + \frac{2327}{x-5}.$

8. $\frac{-4x^3 + 3x - 1}{x + 2}.$

$-4x^2 + 8x - 13 + \frac{25}{x+2}.$

4. $\frac{2x^2 + 3x - 1}{x - 1}.$

$x - 5 - \frac{6}{x-1}.$

9. $\frac{-x^2 - 4x - 1}{x - 1}.$

$x - 5 - \frac{6}{x-1}.$

5. $\frac{-3x^3 + 2x^2 + 5}{x + 2}.$

$-3x^2 + 8x - 16 + \frac{37}{x+2}.$

10. $\frac{x^4 - 2x^2 - 3}{x + \sqrt{3}}$

$(x - \sqrt{3})(x^2 + 1).$

©2013 Shmoop University, Inc. All rights reserved. For classroom use only. Want to print this out for your classroom? Go for it. All other reproduction and distribution is prohibited.

<http://www.shmoop.com/pre-algebra/>
Shmoop will make you a better lover (of literature, math, life...)