

Yellow Belt Advancement
Problem Solving Discipline

Simplify each expression.

1) $-4 - 5a - 1 + 5a$

2) $-5x^3 + x + 7x^2 + 8x$

Label each as rational or irrational, then explain your reasoning:

3) $.66$ _____

$\sqrt{27}$ _____

$\frac{1}{3}$ _____

Simplify each expression.

4) $-5(1 + 7n) - 3(n - 9)$

5) $-5(1 + 6x) - 2(9x - 1)$

Put the following in order from LEAST to GREATEST

6) $\sqrt{8}$ 2.34 $\frac{21}{10}$ $2\frac{1}{3}$

Simplify each expression.

7) $6x^2 + 5x^4y^4 - 6x^4y^4 + 7x^2$

8) $4b^4 - 4a^2b^3 - 5a^2b^3 + a^3$

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

10) $2 + 6n + 3n^3 + 2n + 3n^2 - 7$

Answers to Yellow Belt Advancement Problem Solving Discipline

1) -5

4) $22 - 38n$

7) $-x^4y^4 + 13x^2$

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

2) $-5x^3 + 7x^2 + 9x$

5) $-3 - 48x$

8) $-9a^2b^3 + 4b^4 + a^3$

3) rational, irrational, rational

6) $21/10, 2.9, 2\frac{1}{3}, 2.34$

9) $-5x^4 + 7x^3 + 7x^2 - 6x$