



REVIEW OF ALGEBRA

Pr 1. Compute each of the following and simplify completely.

(a) $\frac{5}{6} \cdot 30$

(b) $-3 \div \frac{1}{4}$

(c) $-\frac{11}{30} + \frac{27}{40}$

(d) $\frac{7}{12} - \left(-\frac{9}{16}\right)$

Pr 2. Compute each of the following and simplify completely.

(a) $\frac{1}{7^{-9}}$

(b) $\left(\frac{7}{2}\right)^{-3}$

(c) $5^2 \cdot 5^{10}$

(d) $-\sqrt{64}$

(e) $\sqrt{-49}$

(f) $\sqrt[5]{-32}$

Pr 3. Simplify the expression, using the order of operations.

(a) $5(2 + 8 \cdot 4) - 7^2$

(b) $3^2 - 18 \div (11 - 5)$

(c) $(x - y)^2$ when $x = 10, y = 7$

Pr 4. Simplify each of the following.

(a) $(3x)^2(5x)$

(b) $5q^3(q^2 - 2q + 6)$

(c) $(q + 4)(q - 8)$

(d) $(x + 5)(x^2 + 4x - 3)$

(e) $(4 - 6y)(4 + 6y)$

(f) $\frac{(y + 5)(4 - y)}{(y + 4)(y - 4)}$

Pr 5. Factor each of the following.

(a) $5x^3 - 15x^2 + 20x$

(b) $9x^3 - 9x^2 + 9x - 9$

(c) $m^2 - 13m + 30$

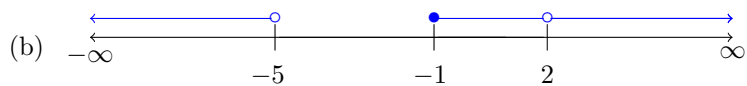
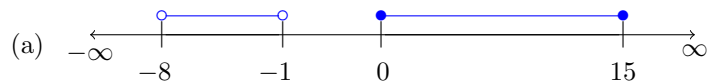
(d) $6w^2 - w - 15$

(e) $98r^3 - 72r$

(f) $8p^2 + 2$

SECTION 5.1 PART A: WRITING INTERVAL NOTATION

Pr 1. Express each of the following using equivalent interval notation and then give a verbal description for each interval.



(c) $\left\{x \mid x < \frac{1}{2} \text{ or } x > 8\right\}$

(d) $\{x \mid x \geq -5 \text{ and } x < 10\}$

(e) $\{x \mid x \neq \pm 4\}$