

Chapter 1.1.1-1.2.4: Problem Set Review

MAT 1275CO
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Problem 1

(a) Evaluate.

$$-(25 - 30) + (6 + (-12))$$

(b) Divide and reduce.

$$\frac{5}{18} \div \frac{15}{24}$$

(c) Subtract.

$$\frac{8}{9} - \frac{3}{4}$$

(d) Write the mixed number as an improper fraction.

$$5\frac{3}{8}$$

Problem 2

(a) Evaluate.

$$6 - 50 \div 2[4 - (-5 + 2) - 2]$$

(b) Evaluate $ab + 3c - 1$ when $a = 2\frac{1}{4}$, $b = \frac{2}{3}$ and $c = \frac{5}{6}$.

(c) Simplify completely. Express your answer with positive exponents only.

$$3x^{-2}$$

(d) Simplify completely. Express your answer with positive exponents only.

$$\frac{a^2 a^3 a^6}{a^5} + a^7 a^3 - a$$

Problem 3

(a) Can the following expression be expressed as a linear expression $Ax + B$? If so, find A and B .

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

(b) Simplify completely.

$$7x^{12} + 2x^5(x^8 - x^4) - x^7[x^2 - 2x(x - 4)]$$

(c) Farah has to use the rain water she has collected to water her plants. She has a bucket of water with $\frac{15}{16}$ gallons of water and a jug with n gallons of water. She wants to use all of the water to water her 10 plants evenly. Find an expression for how much water each plant will get.

Problem 4

Multiply and simplify completely.

(a) $(10x^4 - 2x)(5x^4 - 4x)$

(b) $(x - 5y)^2$

(c) $(x^2 + 2)(2x^2 + 4x + 7)$

Problem 5

(a) Simplify completely. Express your answer with positive exponents only.

$$\frac{(5u^3(2uv^8))^2}{u^2}$$

(b) Fill in the table.

	10	$4x+1$	$x+x^8+5x^{10}$	$x^{13}+3x^{12}+5x^7+x+1$
Degree of Polynomial				
Type of Polynomial				

(c) Evaluate and simplify completely.

$$3ab^2(a^3 + 2a^2b + 5ab^2 - 7b^3) - 5a^2b^4$$