

Chapter 5 and 7 - Polynomials

LESSON 4: ADDING AND SUBTRACTING POLYNOMIALS – WORD PROBLEMS

For any word problems:

- Draw a diagram if applicable
- Write the formula used if applicable
- Write an expression or equation to represent the problem. Define any variables that you are using.
- Then calculate. Show your steps in a logical manner. (Work down, not across!)
- Write a sentence to answer the problem.
- Include units with your answer wherever necessary.

Ex.1: Use the given variables to write each statement as an algebraic expression:

- If n is a number, the product of a number and 6 is increased by 2.

- If w is the width of a rectangular swimming pool and its length is 10 m more than its width, write an expression for the area of the swimming pool?

Ex.2: A rectangle's length is 7 cm greater than its width, w .

- Draw the rectangle and label its dimensions.

- Write an expression to find its perimeter and simplify.

Ex.3: A mechanic charges \$85 an hour plus the cost of parts to repair a vehicle. The parts cost \$455 for the repair on Sylvia's car.

- Write an expression for the total cost, C , of repairing Sylvia's car for any number of hours, n .

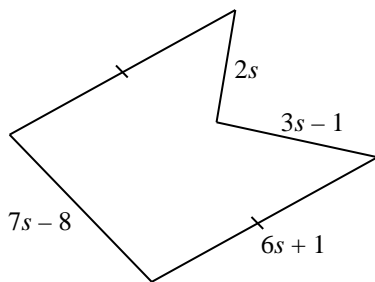
- Use the expression you created in part a) to calculate the cost of repairs that take $5\frac{1}{2}$ h?

Ex.4: In the first semester, Kira decides to play drums for music class. To rent a drum kit, it costs \$55 per month, plus a \$30 deposit.

- a) Write an expression to show the total cost for any number of months, including the deposit.
- b) What is the total cost of renting the drum kit for three months, including the deposit?
- c) In the second semester, Kira decides to play electric guitar. To rent an electric guitar, it costs \$22 per month plus a \$20 deposit. Write an expression to show the total cost for any number of months, including the deposit. How much will it cost her to rent for three months?
- d) Mark wants to learn to play both drums and electric guitar. What is an expression for the total cost of renting both a drum kit and a guitar for any number of months, including both deposits?
- e) What is an expression for the difference between the cost of renting a drum kit, and the cost of renting a guitar for any number of months, including deposits?

Ex.5: Consider the following shape

- a) Write an expression to represent the perimeter



- b) Determine the perimeter if $s = 5$