Lesson Title & Section #: 6-3 Commissions, Royalties, and Piecework Pay

Notes

Lesson Essential Question: How do you compute pay based on percent commission? Piecework pay?

Discussion: What jobs base their pay according to the amount produced?

_____

Commission: ⎫
⎬ A percentage someone makes based on the number produced/sold
Royalty: ⎭

Pieceworker: Employee paid by production, rather than the length of time to do the job.

Piecework Rate: A certain amount of money for each item completed.

Example 1

Adrianna wrote a textbook for high school students. She receives a 10% royalty based on the total sales of the book. The book sells for $47.95, and 17,000 copies were sold last year. How much did Adrianna receive in royalty payments for last year?

Total of sales = 17,000 × 47.95 = $815,150

815,150 × .10 = $81,515

in royalties last year

Date: _____

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Example 2

　　　Allison sells cosmetics part-time from door-to-door. She is paid a monthly commission. She receives 11% of her first $900 in sales and 17% of the balance of her sales. Last month she sold $1,250 worth of cosmetics. How much commission did she earn last month?

$$900 \times .11 = \text{\#}99$$

$$1250 - 900 = 350$$

$$350 \times .17 = \text{\#}59.50$$

$$99 + 59.50 =$$
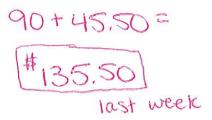
$$\boxed{\text{\#}158.50}$$
in commission

Example 3

　　　Kate works in a dress factory that makes dresses for designer boutiques. She is paid a piecework rate of $85 per unit (piece) produced. Yesterday she made 3 dresses. How much did she earn?

$$3 \times 85 = \boxed{\text{\#}255}$$
yesterday

Example 4

　　　Tony picks strawberries and gets paid at a piecework rate of 45 cents per container for the first 200 containers picked. He receives 65 cents per container for every container over 200 that he picks. Last week, Tony picked 270 containers. How much did he earn?

$$200 \times .45 = \text{\#}90$$

$$270 - 200 = 70$$

$$70 \times .65 = \text{\#}45.50$$

$$90 + 45.50 =$$

$$\boxed{\text{\#}135.50}$$
last week

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Example 5

Glassman Chevrolet pays commission to its car salespeople. They are paid a percent of the profit the dealership makes on the car, not on the selling price of the car. If the profit is under $750, the commission rate is 20%. If the profit is at least $750 and less than or equal to $1,000, the commission rate is 22% of the profit. If the profit is above $1,000, the rate is 25% of the profit. If x represents the profit, express the commission $c(x)$ as a piecewise function.

20% for profits less than $750
22% for profits from $750 to $1000
25% for profits greater than $1000

$$C(x) = \begin{cases} .20x & \text{when } x < 750 \\ .22x & \text{when } 750 \leq x \leq 1000 \\ .25x & \text{when } x > 1000 \end{cases}$$

Example 6

Joyce works at Fortunato's Furniture. She is paid on commission She receives 10% of her first $900 in sales and 15% of the balance of her sales. Last week she earned $750. What was the total value of the furniture she sold?

Commission = Reg. Sales Commission + Extra Sales Commission

$$750 = .10(900) + .15(x - 900)$$

$$750 = 90 + .15x - 135$$

$$750 = .15x - 45$$
$$+45 \qquad\qquad +45$$
$$\overline{795 = .15x}$$
$$\frac{795}{.15} = \frac{.15x}{.15}$$

$$\boxed{x = \$5,300}$$ furniture sold

HW: Pg. 307 #2,3,5,6,10,12,14,23-25,27