Mr. Tu's Excellent Examples

**Module 7
Retail Store
Manager**

Applying Lesson 7.1

1. A store manager often orders items by the gross which is 144 items. Does one gross represent a perfect square number. If so, what number is squared to equal one gross.

   $144 = 12^2$ **This is also referred to as 12 dozen in the retail industry.**

   Twelve is the number squared to equal one gross.

2. A store manager wants to display 169 t-shirts on a table. She has decided that the number of t-shirts in each stack will be equal to the number of stacks. How many t-shirts will be in each stack and how many stacks will the table contain?

   $$\sqrt{169} = 13$$

   The table will contain 13 stacks with 13 t-shirts in each stack.

Applying Lesson 7.2

1. An employee wants to purchase a shirt that normally sells for $20. Employees receive a 35% discount. What is the employee savings for the shirt?

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35% of $20 = $7

The employee discount is $7.00.

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2. Michelle, the Giant Robot store manager, ordered three boxes of pink t-shirts and five boxes of light blue t-shirts. She sold out of these t-shirts in one week. Both colors sold out at about the same time so she wants the next order to be in the same proportion. Her assistant prepares an order for 15 boxes of pink t-shirts and 25 boxes of light blue t-shirts. Determine if the assistant has prepared an order that is in the same proportion.

$$\frac{3}{5} = \frac{15}{25}$$

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3 x 25 = 75   5 x 15 = 75

The assistant has prepared an order in the same proportion.

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Applying Lesson 7.3

1. For every $50 of sales at the Giant Robot, about $4 will end up in refunds. What percentage of sales results in refunds?

$$\frac{4}{50} = \frac{8}{100} = 8\%$$

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About 8% of sales end up in refunds.

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2. Michelle is running a special on t-shirts. If a customer buys two shirts, they receive a third one for free. If one out of every three shirts sold is free, what is the equivalent percentage discount?

$$\frac{1}{3} = 33\frac{1}{3}\%$$

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The percentage discount is $33\frac{1}{3}$%.

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Applying Lesson 7.4

1. Michelle estimates that she sells about 15 long sleeve shirts for every 25 short sleeve shirts she sells. What is the ratio in simplest form of long sleeve shirt sales to short sleeve shirt sales?

Long sleeve shirts to short sleeve shirts = 15:25

15:25 = 3:5

The ratio of long sleeve shirt sales to short sleeve shirt sales is three to five.

2. Michelle pays $132 for a dozen shirts. What is her cost per shirt?

$$\frac{132}{12} = \frac{x}{1}$$
$$12 \bullet x = 132 \bullet 1$$
$$12x = 132$$
$$\frac{12x}{12} = \frac{132}{12}$$
$$x = 11$$

The cost is $11 per shirt.

Applying Lesson 7.5

1. Michelle buys graphic art for $32 per print. She wants to mark it up 40%. What will the mark-up be?

40% of $32 = $12.80

The mark-up for graphic art is $12.80.

2. A customer's order has been totaled at the counter. He is purchasing $193 worth of product. He presents a coupon he received in the mail for a 15% discount. How much money will the coupon save him?

15% of $193 = $28.95

The customer will save $28.95 using the 15% discount coupon.

Applying Lesson 7.6

1. A customer is trying to decide between buying a $48 item or a less expensive item. Michelle tells him that she will reduce the price of the $48 item by $6. What percentage savings is she offering the customer?

    $6 is 12.5% of $48. She is offering the customer a 12.5% savings.

2. Due to a power failure, Michelle is calculating her sales by hand. She has added up the items a customer has selected and the total comes to $78. She must charge 6% sales tax. How much does she need to add for sales tax?

    6% of $78 is $4.68
    Michelle must add $4.68 for sales tax.

Applying Lesson 7.7

1. Michelle is selling stuffed animals for $14 each. She paid $10 each for them. What percentage mark-up does she have?

    She has marked-up the items $4.

    $$\frac{4}{10} = \frac{40}{100} = 40\%$$

    Michelle has a 40% mark-up on stuffed animals.

2. A store manager was just hired. His supervisor expects him to increase the annual store revenue by 7% each year during the next three years. The revenue for the past year was $500,000. What does his supervisor expect the annual revenue to be for the third year?

1st Year	2nd Year	3rd Year
($500,000)(.07)(1) = $35,000	($535,000)(.07)(1) = $37,450	($572,450)(.07)(1) = $40,071.50
Annual sales for first year =	Annual sales for second year =	Annual sales for third year =
$500,000 + $35,000 = $535,000	$535,000 + $37,450 = $572,450	$572,450 + $40,071.50 = $612,521.50

    The supervisor expects the sales for the 3rd year to be $612,521.50