Grade 5 NS 1.2

Grade 6 NS 1.4

Review: Grade 3 AF 1.1

Other:

Using Bar Models to Solve Percent Word Problems

Bar models can be used to provide an alternative way to visualize percent problems that involve discount, sale price, and markup. Bar models help students build upon their prior understanding of percentages and apply that knowledge to solving word problems.

Today's Objective: Using bar models to solve percent problems involving discount, sale price, and markup.

Standards: Grade 6 NS 1.4 and Grade 7 NS 1.7

Example 1:

Your Turn 1: Problem involving discount

Example 2: Problem involving discount and sale price

Bar Model **Method 2** **Method 3**

Your Turn 2a

Your Turn 2a: Problem involving discount and sale price (solution)

Bar Model

25% of $220 is $55 (sale price)

∴

Method 2

$$\frac{\quad}{220} = \frac{}{100}$$

$$\frac{\quad}{220} =$$

20 – $16

∴

Method 3

$220 – $165 = $55

∴

$220 – $

∴

Your Turn 2b: Problem involving discount and sale price

Bar Model | **Method 2** | **Method 3**

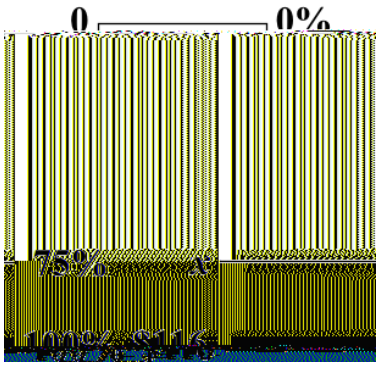
Your Turn 2b: Problem involving discount and sale price (solution)

Bar Model

25% of $116 is $29 (sale price)

∴

Method 2



Method 3

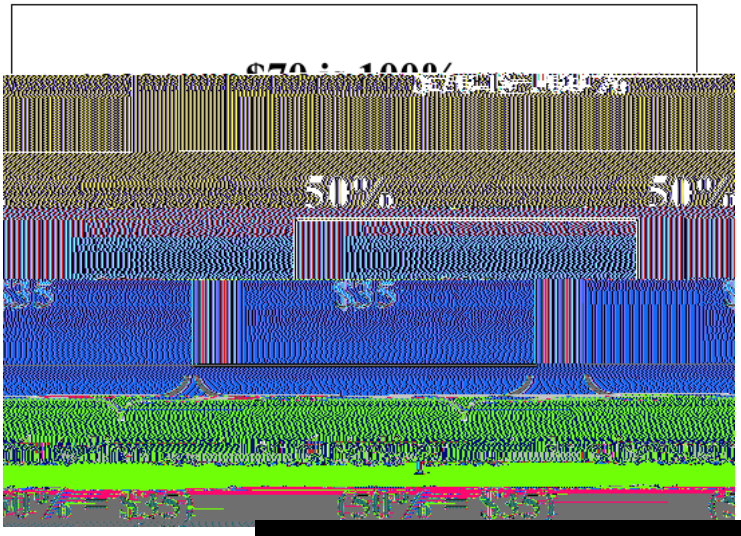
$116 – $87 = $29

∴

$116 – $87 = $29

Example 3a: Problem involving multiple discounts

Bar Model



∴

Method 2

$$= \frac{50}{100} \cdot 70$$

$$= \frac{1}{2} \cdot 70$$

$$= \frac{2 \cdot 35}{2}$$

$$= 35$$

$70 – $35 = $35

$x =$ ——

$x =$ —

$x =$ ——

$x =$

$35 – $17.50 = $17.50

∴

Example 3b: Problem involving multiple discounts

Bar Model

∴

Method 2

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$64 – $16 = $48

***x* =** ——

***x* =** —

***x* =** ————

***x* =**

$48 – $36 = $12

∴

Your Turn 3: Problem involving multiple discounts (solution)

Bar Model

Method 2

$90 – $36 = $54

$54 – $13.50 = $40.50

∴

∴

Example 4: Problem involving markup

$\frac{x}{\quad} = \frac{\quad}{\quad}$

$\frac{x}{\quad} = \frac{\quad}{\quad}$

$\frac{x}{\quad} = \frac{\quad}{\quad}$

$x = \frac{\quad}{\quad}$

$x = \frac{\quad}{\quad}$

$x =$

Your Turn 4: Problem involving markup

Bar Model **Method 2**

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Extension 1: Problem involving discount and tax

Bar Model

Method 2

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Extension 1: Problem involving discount and tax (solution)

Bar Model **Method 2**

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