



Primary 5

Model Approach

Lesson 9: Grouping(I)

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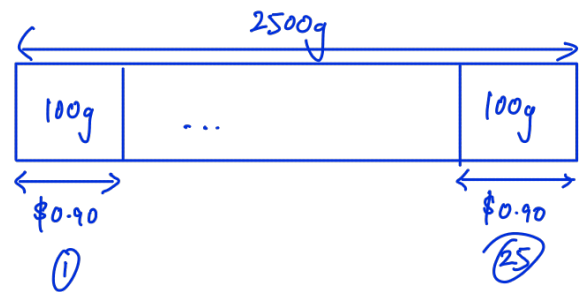
LESSON 9: Grouping (I)**GUIDED EXAMPLE 1**

Raju bought 2.5 kg of grapes.
The grapes costs \$0.90 per 100 grams.
How much did he need to pay for them?

$$2.5 \text{ kg} = 2500 \text{ g}$$

$$2500 \text{ g} \div 100 \text{ g} = 25$$

$$25 \times \$0.90 = \$22.50$$




Ans : \$22.50

GUIDED EXAMPLE 2

Zila uses the recipe below to make Macaroni and Cheese.
 She has 1200 g of macaroni, 460 g of cheese and 275 g of butter.
 What is the maximum number of people that she can prepare
 the Macaroni and Cheese for?

Macaroni and Cheese recipe
 (Serves 4 people)

300 g macaroni
 150 g cheese
 50 g butter

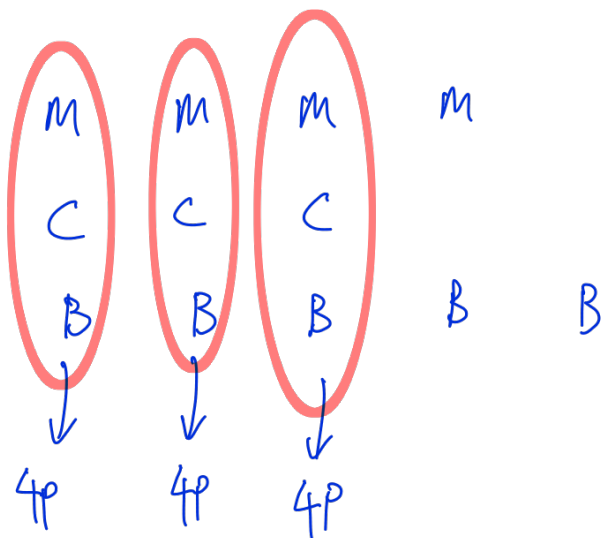
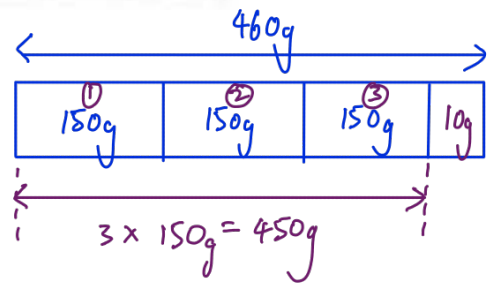


(Rosyth P5 CA2 Q4)

$$1200g \div 300g = 4$$

$$460g \div 150g = 3 \quad R \ 10g$$

$$275g \div 50g = 5 \quad R \ 25g$$



$$3 \times 4 = 12$$

Ans : 12

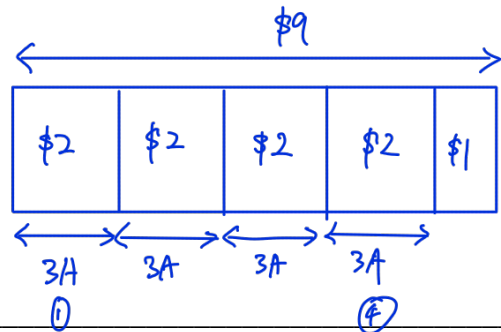
GUIDED EXAMPLE 3

Non-negotiable

Apples were only sold at 3 for \$2.

What was the greatest number of apples Mrs. Lim can buy with \$9?

$$\begin{aligned} \$9 \div \$2 &= 4 \text{ R} \$1 \\ 4 \times 3 &= 12 \end{aligned}$$



GUIDED EXAMPLE 4

Ans: 12

Mr Chong paid \$348 for the tickets to "Shrack the Musical" at the prices shown below. How many tickets did he buy?



**SHRACK
the MUSICAL**

Tickets at \$12 each
Save \$6 for every 4 tickets.

HURRY!

(ACS P5 SA1 Q11)

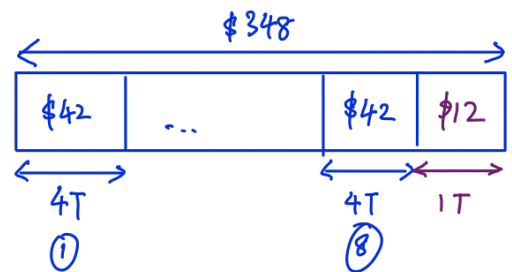
$$\begin{array}{ccccccc} T & T & T & T & & & \\ \$12 & \$12 & \$12 & \$12 & -\$6 & & \end{array}$$

4 tickets cost $4 \times \$12 - \$6 = \$42$

$$\$348 \div \$42 = 8 \text{ R } \$12$$

$$\$12 \div \$12 = 1$$

$$8 \times 4 + 1 = 33$$



Ans: 33

Quotient: No. complete groups
Remainder: Dividends not in groups

GUIDED EXAMPLE 5

A box of face masks cost \$8.99.

When a customer buys 5 boxes, 1 box will be given free.

Rachel wants to buy 25 boxes of face masks.

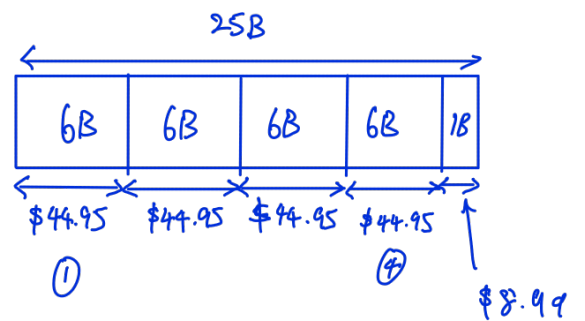
What is the least amount of money she would need to pay?

B B B B B B
 \$8.99 \$8.99 \$8.99 \$8.99 \$8.99 Free

6 Boxes cost $5 \times \$8.99 = \44.95

$$25 \div 6 = 4 \text{ R } 1$$

$$4 \times \$44.95 + \$8.99 = \$188.79$$



Ans : \$188.79

GUIDED EXAMPLE 6

At a sale, a discount of \$4 was given for every 5 boxes of cookies.
 Each box of cookies cost \$12. Mr. Lim paid a total of \$204.
 What was the most number of boxes of cookies Mr. Lim bought?

B B B B B Discount
 \$12 \$12 \$12 \$12 \$12 - \$4

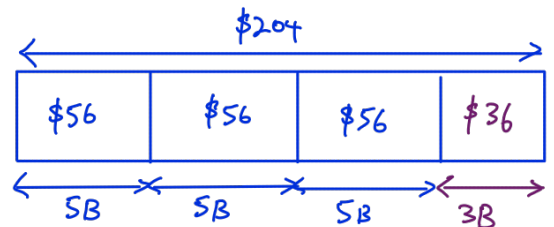
5 Boxes cost $5 \times \$12 - \$4 = \$56$

$\$204 \div \$56 = 3 \text{ R } \$36$

$\$36 \div \$12 = 3$

$3 \times 5 + 3 = 18$

Ans : 18



BUILD YOUR UNDERSTANDING

- There is a promotion to Science Centre during the holidays.
For every 4 visitors, the 5th visitor will be given a free admission ticket.
How many free tickets will be given to a group of 46 visitors?

pay pay pay pay free

$$46 \div 5 = 9 \text{ R } 1$$

Ans : 9

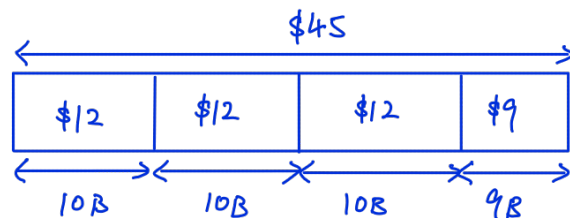
- Janet earns \$1.00 for each box of cookies she sells.
For every 10 boxes she sells, she will earn a bonus of \$2.00.
If she earns \$45, what is the least number of boxes of cookies she needs to sell?

10 Boxes sold earns her $10 \times \$1 + \$2 = \$12$

$$\$45 \div \$12 = 3 \text{ R } \$9$$

$$\$9 \div \$1 = 9$$

$$3 \times 10 + 9 = 39$$

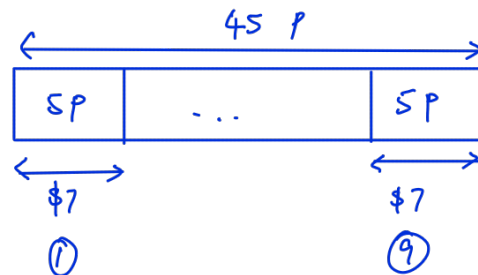


Ans : 39

3. A bookstore sells either one pen for \$2 or 5 pens for \$7.
Wendy wants to buy exactly 45 pens.
What is the least amount of money she will need to pay?

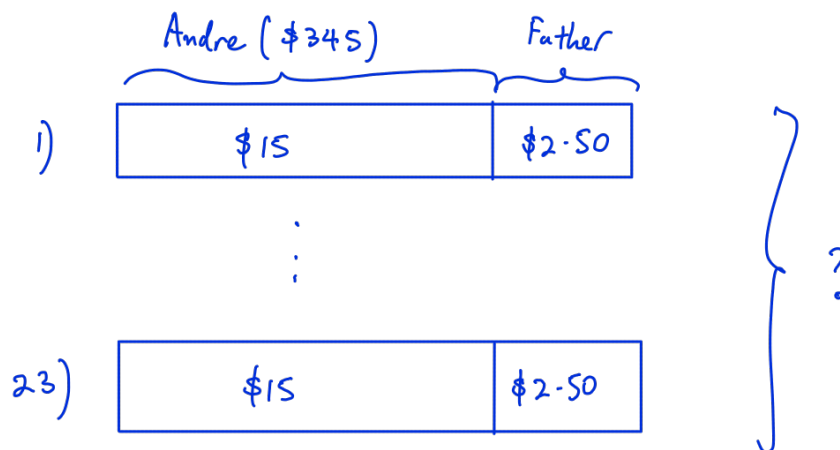
$$45 \div 5 = 9$$

$$9 \times \$7 = \$63$$



Ans: \$63

4. For every \$15 Andre saved, his father would top up \$2.50 into his savings.
After a few months, Andre saved a total of \$345 by himself.
What was his total savings now?




$$\$345 \div \$15 = 23$$

$$\$15 + \$2.50 = \$17.50$$

$$23 \times \$17.50 = \$402.50$$

Ans: \$402.50

5.

<p>My Little Pony Musical</p> <p>Tickets at \$18 each</p> <p>\$3 discount for every 4 tickets</p>	
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Mrs Milton paid \$363 for tickets to the musical.
How many tickets did she pay for?

(CHIJ P5 SA2 Q6)

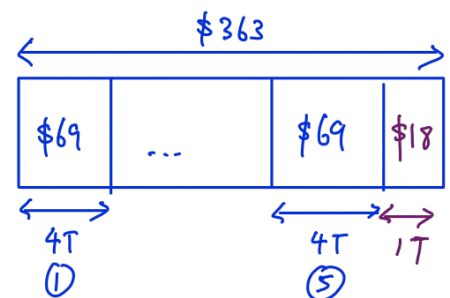
T	T	T	T	Discount
\$18	\$18	\$18	\$18	-\$3

4 tickets cost $4 \times \$18 - \$3 = \$69$

$\$363 \div \$69 = 5R\$18$


$\$18 \div \$18 = 1$

$5 \times 4 + 1 = 21$



Ans: 21

6.



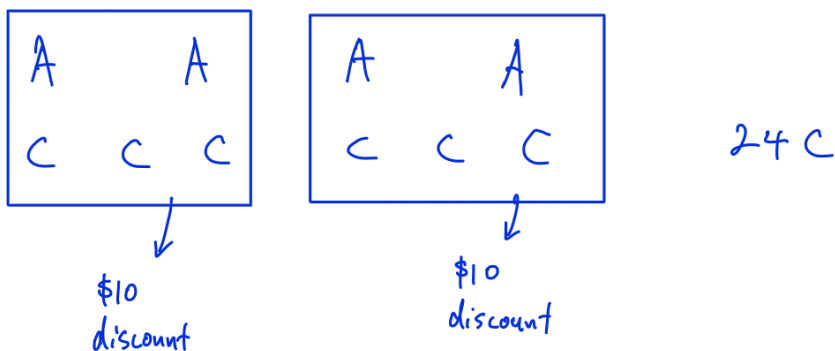
TRICK-YOUR-EYES MUSEUM

Tickets are priced at:
 \$25 each (adult)
 \$20 each (child)

For every 2 adults and 3 children tickets bought, a \$10 discount will be given.

Mrs Wong and 3 parent volunteers took a class of 30 children to the Trick-Your-Eyes Museum.

What was the minimum cost of all the tickets?






$$4 \times \$25 + 30 \times \$20 = \$700$$

$$\$700 - 2 \times \$10 = \$680$$

Ans: \$680

7. Mrs Tan bought the following fruits from a stall. She paid a total of \$25.50 for them. Find the cost of 100 g of rambutans.

Rate	 Grapes \$5 per kg	 Apples 3 for \$1	 Rambutans	
Qty	1.5 kg	12	4 kg	Total
Total value	\$7.50	\$4	\$14	\$25.50

(Tao Nan P5 SA2 Q16)

$$1.5 \times \$5 = \$7.50$$

$$12 \div 3 = 4$$

$$4 \times \$1 = \$4$$

$$\$25.50 - \$7.50 - \$4 = \$14$$

$$\begin{array}{l} \div 40 \left\{ \begin{array}{l} 4000 \text{ g of rambutans cost } \$14 \\ 100 \text{ g of rambutans cost } \$14 \div 40 = \$0.35 \end{array} \right. \end{array}$$

Ans : \$0.35

CHALLENGE YOURSELF

Yummy Café was having a special promotion for children's meals.

SPECIAL PROMOTION!

Order 3 sets of children's meal & receive

1 set of children's meal free!!!

← pay pay pay free

Mrs. Julia wanted to invite 30 children to a party at Yummy Café.

Each set of children's meal costs \$10.75.

What was the minimum amount that Mrs. Julia had to pay?

$$30 \div 4 = 7 \text{ R } 2$$

Received 7 free sets,

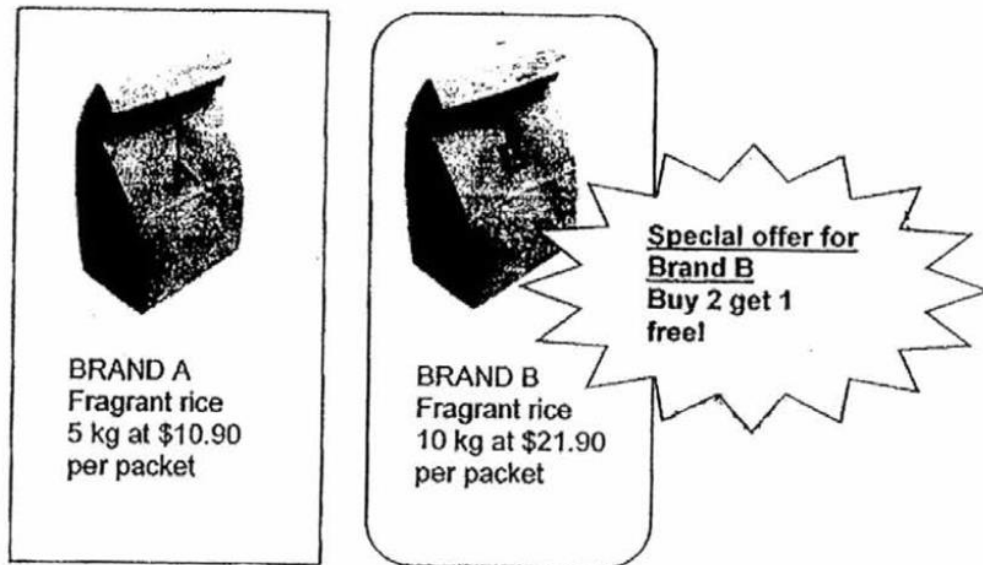
Need to pay for $30 - 7 = 23$ sets.

$$23 \times \$10.75 = \$247.25$$

Ans : \$247.25

CHALLENGE YOURSELF

Two different brands of rice are on promotion at a supermarket.



Mrs Neo wants to buy 30 kg of rice.

How much will she save if she buys Brand B rice instead of Brand A rice?

(Nan Hua P5 CA1 Q11)

$$\text{Brand A costs } 6 \times \$10.90 = \$65.40$$

$$\text{Brand B costs } 2 \times \$21.90 = \$43.80$$

$$\text{Savings} = \$65.40 - \$43.80$$

$$= \$21.60$$

$$\text{Ans: } \underline{\$21.60}$$

CHALLENGE YOURSELF

There are 28 markers in a box.

4 markers will be given free of charge for every 5 boxes purchased.

What is the least number of boxes of markers Miss Ang must purchase if she needs 432 markers?

(Red Swastika P5 CA1 Q12)

Box	Box	Box	Box	Box	free
28m	28m	28m	28m	28m	+4m

5 Boxes yield $5 \times 28 + 4 = 144$ Markers

$$432 \div 144 = 3$$

3 complete groups of 5 boxes are required

$$3 \times 5 = 15$$

Ans : 15