

Find the value of each of the following expressions.

a) $14 - 11 \div 1$

First

$11 \div 1 = 11$

Second

$14 - 11 = 3$

RAP

$11 \times 1 = 11$

$11 \div 11 = 1$

$14 - 3 = 11$

$3 + 11 = 14$

Do (•, ×) multiplication or division

then

addition (+)

or subtraction (-)

(÷, /) First

or subtraction (-)

b) $9 + 6 \times 5$

F:

$6 \times 5 = 30$

RAP

$30 \div 6 = 5$

$$\begin{array}{r} 5 \quad 5 \quad 5 \\ + 5 \quad 5 \quad 5 \\ \hline 10 + 10 + 10 = 30 \end{array}$$

S: $9 + 30 = 39$

$39 - 9 = 30$

$39 - 30 = 9$

c) $5 \times 8 + 6 \div 6 - 12 \times 2$

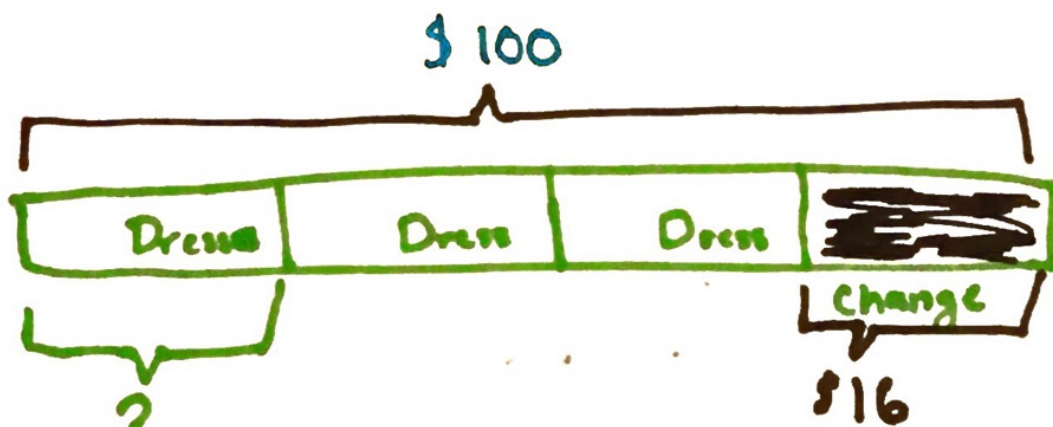
F:

S:

Mary bought 3 dresses. Each dress cost the same amount. She gave the cashier \$100 and got \$16 change back.

How much did each dress cost?

Important Information



$$100 - 16 = 84$$

RAP

$$\begin{array}{r} 100 \\ - 16 \\ \hline 84 \end{array}$$

$$3 \overline{)84}$$

RAP it

Each dress cost _____

John is 15 kg heavier than Peter.
 Their total mass is 127 kg.
 Find John's mass.



$$127 - 15 = 112$$

RAP

$$2 \overline{) 112}$$

$$\begin{array}{r} 127 \\ - 112 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 112 \\ + 15 \\ \hline 127 \end{array}$$

RAP it

John's mass is _____.

Multiply

a) 46×50

Method 1: $46 \times 50 = \begin{array}{r} 3 \\ 46 \\ \times 50 \\ \hline 2300 \end{array}$

Method 2:

$40 + 6$ \rightarrow Write on number in expanded form

50	50×40	50×6	
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$\begin{array}{r} 2000 \\ 300 \\ \hline 2300 \end{array}$

Method 3: Traditional

$\begin{array}{r} 3 \\ 46 \\ \times 50 \\ \hline 00 \\ + 2300 \\ \hline 2300 \end{array}$ \leftarrow Do not forget the place holder as you move to the next place value.

RAP it by using a different method.

b) 207×60

Method 2:

200 7

60	200×60	7×60	
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$\begin{array}{r} 12,000 \\ + 420 \\ \hline 12,420 \end{array}$

RAP it: Choose a different method.

Multiply

a) 22×12

Method 2:

20

2

	10	2
20	20×10	20×2
2	10×2	2×2

Write both numbers in expanded form.

$$\begin{array}{r} 200 \\ 40 \\ 20 \\ 4 \\ \hline 264 \end{array}$$

Method 3: Traditional - RAP it

$$\begin{array}{r} 22 \\ \times 12 \\ \hline \end{array}$$

First

Second

Remember to place the place holder when moving to the next place value.

b) 457×35

Write both numbers in expanded form.

Method 2:

	400	50	7
30	400×30	50×30	30×7
5	400×5	50×5	5×7

$$\begin{array}{r} 12,000 \\ 2,000 \\ 1,500 \\ 210 \\ 35 \\ \hline 15,745 \end{array}$$

Method 3: Traditional RAP it

$$\begin{array}{r} 457 \\ \times 35 \\ \hline \end{array}$$

First

Second

Divide

a) 70 divide by 30 →

Method 2

$$\begin{array}{r}
 2 \leftarrow \text{estimated quotient} \\
 30 \overline{) 70} \\
 \underline{-60} \\
 10
 \end{array}$$

Answer is 2 R 10

Method 1

$$70 \div 30$$

$$7 \div 3 = ?$$

← ~~cross~~ out all zero

← can not divide 7 by 3 exactly
Method 2 works best.

RAP it

$$30 \times \underline{2} + 10$$

$$60 + 10 = 70$$

b) 540 divide by 70

Method 1

$$540 \div 70 =$$

$54 \div 7 =$ ← cannot divide 54 by 7 exactly

Method 2

$$\begin{array}{r}
 7 \leftarrow \text{estimated quotient} \\
 70 \overline{) 540} \\
 \underline{-490} \\
 50
 \end{array}$$

$$\underline{7} \text{ R } \underline{50}$$

RAP it

$$70 \times \underline{7} + 50$$

Method 3

estimated quotients →

	70	
9	70×9	630
8	70×8	560
7	70×7	490

$$\begin{array}{r}
 540 \\
 \underline{-490} \\
 50
 \end{array}$$

Too Big

$$\underline{50} < 70$$

$$\underline{7} \text{ R } \underline{50}$$

c) 95 divide by 30

Method 3

	30	
3	30×3	90
2	30×2	60

$$\begin{array}{r}
 95 \\
 \underline{-60} \\
 25
 \end{array}$$

Too Big

$$\underline{25} < 30$$

Answer 2 R 25

Method 2

$$30 \overline{) 95}$$

RAP it -