

Assessment : Section C Checkpoint

Problem 1

Goals Assessed

- Use an algorithm that uses partial quotients to divide multi-digit numbers of up to four digits by one-digit divisors, resulting in numbers with or without a remainder.

Statement

A rectangular wall that is 8 feet tall is covered with 296 square feet of wallpaper.

How many feet long is the wall? Explain or show your reasoning. Use a diagram if it is helpful.



Solution

37 feet. Sample reasoning: $80 + 80 + 80 + 56 = 296$ and $10 + 10 + 10 + 7 = 37$

Problem 2

Goals Assessed

- Use an algorithm that uses partial quotients to divide multi-digit numbers of up to four digits by one-digit divisors, resulting in numbers with or without a remainder.

Statement

Find the value of $1,925 \div 7$ using an algorithm that uses partial quotients.

Solution

275. Sample reasoning:

$$\begin{array}{r}
 \boxed{275} \\
 5 \\
 70 \\
 200 \\
 7 \overline{)1,925} \\
 \underline{-1,400} \\
 525 \\
 \underline{- 490} \\
 35 \\
 \underline{- 35} \\
 0
 \end{array}$$

Problem 3

Goals Assessed

- Use an algorithm that uses partial quotients to divide multi-digit numbers of up to four digits by one-digit divisors, resulting in numbers with or without a remainder.

Statement

Mai is putting together a photo album. She has 229 photos. Each page can hold 9 photos. How many pages of the photo album does Mai need for all the photos? Explain or show your reasoning.

Solution

26 pages. Sample reasoning: 229 divided by 9 gives 25 with a remainder of 4. This means that 25 pages will be full and there will be 1 page with only 4 photos.

$$\begin{array}{r}
 \boxed{25} \\
 5 \\
 20 \\
 9 \overline{)229} \\
 \underline{- 180} \\
 49 \\
 \underline{- 45} \\
 4
 \end{array}$$