

Three countries in the Olympics won a total of 93 medals. If each country won an equal number of medals, how many medals did each win?

For a – d, select which responses below could be possible solutions.

(A)

$$\begin{array}{r}
 3 \overline{) 93} \\
 \underline{-30} \phantom{0} \\
 63 \\
 \underline{-30} \phantom{0} \\
 33 \\
 \underline{-30} \phantom{0} \\
 3 \\
 \underline{-3} \phantom{0} \\
 0
 \end{array}$$

(B)

$$\begin{array}{r}
 90 \phantom{0} \\
 3 \overline{) 270} \phantom{0} \\
 \phantom{0} \overline{) 9} = 279
 \end{array}$$

(C)  $93 + 93 + 93 = 279$

(D)

$$\begin{array}{c}
 \textcircled{20} \quad \textcircled{20} \quad \textcircled{20} \\
 \textcircled{10} \quad \textcircled{10} \quad \textcircled{10} \\
 \textcircled{1} \quad \textcircled{1} \quad \textcircled{1}
 \end{array}$$

### Scoring

2 points: Student selected all correct responses (A, D).

1 point: Student selected one of the two correct responses (A or D).

0 points: Student selected no correct responses.

### Key and Distractor Analysis:

- A. Key. Correctly shows division can be solved with subtraction.
- B. Student does not recognize the question as division, instead choosing the area model as an example of multiplication.
- C. Student does not recognize the question as division, instead choosing repeated addition as an example of multiplication.
- D. Key. Correctly shows division using grouping.

## Numbers and Operations in Base 10

4NBT

### Use place value understanding and properties of operations to perform multi-digit arithmetic

6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.