TOPIC: LONG DIVISION

Long Division

◆ When dividing large numbers, we use a process called **long division**.

► To check our answer we multiply **quotient** × **divisor** and see if it equals the _____.

Recall Multiplying Large Numbers	New Dividing Large Numbers
$\begin{array}{r} 28 \\ \times\ 3 \\ \hline 24 \\ +60 \\ \hline 84 \end{array}$ Partial products	$3\overline{)84}$

◆ If the divisor is **larger** than the leading digit of the dividend, then we divide into the _____ digits instead.

EXAMPLE Use long division to find the quotient. Check your work with multiplication.

$6\overline{)1248}$

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PRACTICE Find the quotient.

(***A***) $4\overline{)68}$

(***B***) $8\overline{)152}$

(***C***) $7\overline{)3682}$

EXAMPLE Find the quotient and check your answer using multiplication.

$23\overline{)1288}$

PRACTICE Find the quotient. *Hint: If needed, use the first 3 or 4 digits of the dividend.*

(***A***) $12\overline{)7344}$

(***B***) $203\overline{)40803}$

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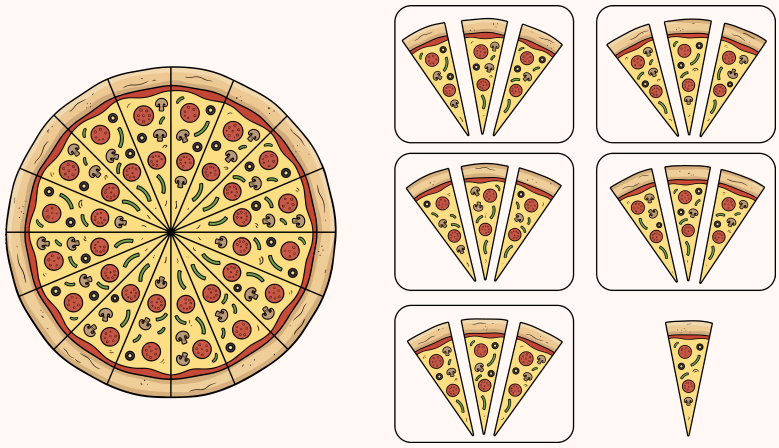
Remainders with Division

◆ If the quotient does not come out evenly, the amount _____ is called the **remainder**.

► If a number is **divisible** by another number that means the remainder is ____.

New **Remainders**



$5\overline{)16}$

◆ To check our answer we multiply **quotient** × **divisor** then _____ and see if it equals the **dividend**.

EXAMPLE Use long division to find the quotient and state the remainder. Check your work with multiplication.

$6\overline{)1258}$

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PRACTICE Find the quotient and state the remainder.

(***A***) $3\overline{)70}$

(***B***) $7\overline{)184}$

(***C***) $9\overline{)3345}$

EXAMPLE Find the quotient, state the remainder, and check your answer using multiplication.

$21\overline{)19881}$

PRACTICE Find the quotient and state the remainder.

(***A***) $11\overline{)7344}$

(***B***) $302\overline{)408503}$