## Mental Math: Division Patterns

You can find how many fives are in 2,000 by following these steps.

- Rewrite each problem as a multiplication fact.
- Circle all the numbers in the basic fact to see how many zeros to write in the quotient.

$$
\begin{array}{ll}
20 \div 5=4 & (5) \times(4)=20 \\
200 \div 5=40 & \text { (5) } \times(4) \mathbf{0}=20 \\
2,000 \div 5=? & \text { (5) } \times(4) \mathbf{0 0}=2000 \\
\text { So } 2,000 \div 5=400
\end{array}
$$

- Write the quotient. If there is a zero in the basic fact, the quotient has one fewer zero than the dividend. Otherwise the quotient has the same number of zeros as the dividend.

Use a basic division fact and patterns to find each quotient.

1. $45 \div 9=$ $\qquad$

$$
450 \div 9=
$$

2. $21 \div 3=$ $\qquad$ 3. $81 \div 9=$

$$
210 \div 3=
$$

$810 \div 9=$ $\qquad$
$\qquad$

$$
810 \div 9=
$$

$$
8,100 \div 9=
$$

$\qquad$
4. $36 \div 6=$ $\qquad$
$360 \div 6=$ $\qquad$
$3,600 \div 6=$ $\qquad$
5. $72 \div 8=$ $\qquad$
6. $12 \div 4=$ $\qquad$
$720 \div 8=$ $\qquad$ $120 \div 4=$ $\qquad$
$7,200 \div 8=$ $\qquad$
$\qquad$

Divide mentally. Write the basic division fact and the quotient.
7. $480 \div 6=$ $\qquad$
8. $1,500 \div 3=$ $\qquad$
Basic Fact: $\qquad$
Basic Fact: $\qquad$
9. $36,000 \div 6=$ $\qquad$
Basic Fact: $\qquad$

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\text { So, } 2,000 \div 5=400
\end{array}
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- Write the quotient. If there is a zero in the basic fact, the quotient has one fewer zero than the dividend. Otherwise the quotient has the same number of zeros as the dividend.

Use a basic division fact and patterns to find each quotient.

| 1. $45 \div 9=$ | 5 | 2. $21 \div 3=$ | 7 | 3. $81 \div 9=$ | 9 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $450 \div 9=$ | 50 | $210 \div 3=$ | 70 | $810 \div 9=$ | 90 |
| $4,500 \div 9=$ | 500 | $2,100 \div 3=$ | 700 | $8,100 \div 9=$ | 900 |
| 4. $36 \div 6=$ | 6 | 5. $72 \div 8=$ | 9 | 6. $12 \div 4=$ | 3 |
| $360 \div 6=$ | 60 | $720 \div 8=$ | 90 | $120 \div 4=$ | 30 |
| $3,600 \div 6=$ | 600 | $7,200 \div 8=$ | 900 | $1,200 \div 4=$ | 300 |

Divide mentally. Write the basic division fact and the quotient.
7. $480 \div 6=$ $\qquad$ 8. $1,500 \div 3=$ $\qquad$ 9. $36,000 \div 6=$ $\qquad$

Basic Fact: $48 \div 6=8$ Basic Fact: $15 \div 3=5 \quad$ Basic Fact: $36 \div 6=6$

