



Chapter 11: Calculation Rules (Multiplication)

Year 5

Worksheet B: Use the Laws of Arithmetic to Simplify Calculations

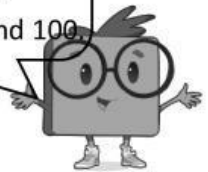
Use the commutative law of multiplication to help you multiply.

(a) $4 \times 12 \times 25 = 12 \times 4 \times 25$

$= 12 \times \underline{\hspace{2cm}}$

$= \underline{\hspace{2cm}}$

The commutative law of multiplication says that you can swap the order of 12 and 4. It is easier to multiply 12 and 100.



(b) $2 \times 57 \times 50 = 57 \times \underline{\hspace{2cm}} \times 50$

$= 57 \times \underline{\hspace{2cm}}$

$= \underline{\hspace{2cm}}$

(c) $25 \times 23 \times 4 = 25 \times \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

$= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$

$= \underline{\hspace{2cm}}$

(d) $5 \times 175 \times 2$

(e) $4 \times 87 \times 25$

5. Use the associative law of multiplication to help you multiply.

(a) $48 \times 25 = 12 \times 4 \times 25$

$= 12 \times \underline{\hspace{2cm}}$

$= \underline{\hspace{2cm}}$

The associative law of multiplication says that you can multiply 4 and 25 first. It is easier to multiply 12 and 100.



(b) $45 \times 20 = 9 \times \underline{\hspace{2cm}} \times 20$

$= 9 \times \underline{\hspace{2cm}}$

$= \underline{\hspace{2cm}}$

$$\begin{aligned}
 \text{(c)} \quad 28 \times 25 &= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} \times 25 \\
 &= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} \\
 &= \underline{\hspace{2cm}}
 \end{aligned}$$

$$\text{(d)} \quad 28 \times 4 \times 25$$

$$\text{(e)} \quad 44 \times 25$$

6. Use the distributive law of multiplication to help you multiply

$$\begin{aligned}
 \text{(a)} \quad 75 \times 17 &= 75 \times 10 + 75 \times 7 \\
 &= 750 + 525 \\
 &= \underline{\hspace{2cm}}
 \end{aligned}$$

17 = 10 + 7
It is easier to multiply 75 and 10, and 75 and 7. Then, add them together.



$$\begin{aligned}
 \text{(b)} \quad 59 \times 15 &= 59 \times 10 + 59 \times 5 \\
 &= \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \\
 &= \underline{\hspace{2cm}}
 \end{aligned}$$

$$\begin{aligned}
 \text{(c)} \quad 71 \times 16 &= 71 \times \underline{\hspace{2cm}} + 71 \times \underline{\hspace{2cm}} \\
 &= \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \\
 &= \underline{\hspace{2cm}}
 \end{aligned}$$

$$\begin{aligned}
 \text{(d)} \quad 150 \times 15 &= 150 \times \underline{\hspace{2cm}} + 150 \times \underline{\hspace{2cm}} \\
 &= \underline{\hspace{2cm}} + \underline{\hspace{2cm}} \\
 &= \underline{\hspace{2cm}}
 \end{aligned}$$