

Master Maths 7 Worksheet 10

Number Laws

10

Name: _____

1. State whether the following statements are true (*T*) or false (*F*).

(a) $5 + 4 = 4 + 5$

(b) $9 - 6 = 6 - 9$

(c) $7 \times 3 = 3 \times 7$

(d) $9 \div 3 = 3 \div 9$

(e) $(9 + 4) + 8 = 9 + (4 + 8)$

(f) $(3 \times 5) \times 2 = 3 \times (5 \times 2)$

(g) $(9 - 4) - 3 = 9 - (4 - 3)$

(h) $(12 \div 6) \div 2 = 12 \div (6 \div 2)$

2. Evaluate the following problems two ways.

Example

$$\begin{aligned} &5(6 + 8) \\ &= 5 \times (6 + 8) \\ &= 5 \times 14 \\ &= \mathbf{70} \end{aligned}$$

$$\begin{aligned} &5(6 + 8) \\ &= 5 \times 6 + 5 \times 8 \\ &= 30 + 40 \\ &= \mathbf{70} \end{aligned}$$

(a) $4(8 + 9)$

$4(8 + 9)$

(b) $5(20 - 7)$

$5(20 - 7)$

3. Fill in the spaces in the equations below.

(a) $8 \times 47 = 8 \times (50 - \square)$

(b) $8 \times 47 = 8 \times (40 + \square)$

4. Using questions 2 and 3 as examples show two ways to solve the following problem.

7×59

7×59

5. Circle the calculations below (**A - D**) that would give the same answer as 12×28 ? More than one answer.

A $4 \times 3 \times 7 \times 4$

B $9 \times 3 \times 14 \times 2$

C $7 \times 2 \times 4 \times 6$

D $4 \times 14 \times 2 \times 3$

6. The technique in question 5 can be used to make calculations easier.

Example

$$\begin{aligned} &18 \times 55 \\ &= 2 \times 9 \times 5 \times 11 \\ &= 2 \times 5 \times 9 \times 11 \\ &= 10 \times 99 \\ &= \mathbf{990} \end{aligned}$$

Use this technique to solve the following calculations.

(a) 14×45

(b) 16×35

7. Jemma's calculator had the **8** button broken. Give an example of how Jemma could solve the following problems using her calculator.

Example

$$\begin{aligned} &28 \times 87 \\ &= 4 \times 7 \times (90 - 3) \end{aligned}$$

(a) 18×81

(b) 28×895
