

# Always

# Sometimes

# Never

Answer Key

1. Max gets a pay raise of 30%. Jim gets a pay raise of 25%. So Max gets the bigger pay raise. *Sometimes*

2. When you cut a piece off a shape, you reduce its area and perimeter.

*Sometimes*

3. If you add the same number to the top and bottom of a fraction, the fraction gets bigger in value. *Sometimes*

4. In a sale, every price was reduced by 25%. After the sale, every price was increased by 25%. So the prices went back to where they started. *Never*

5.  $(a+b)/2 \geq (ab)^{1/2}$  *Sometimes*

6. If you divide the top and bottom of a fraction by the same number, the fraction gets smaller in value. *Never*

7. It doesn't matter which way you multiply, you get the same answer, like...

$$a \times b = b \times a. \quad \text{Always}$$

8. If you add a number to 12, you get an answer greater than 12. *Sometimes*

$$-4 + 12 \neq 12$$

9. The square root of a number is less than the number. *Sometimes*

$$\sqrt{\frac{1}{4}} \neq \frac{1}{4}$$

$$= \frac{1}{2}, \quad \neq \frac{1}{4}$$

10. It doesn't matter which way you divide, you get the same answer, like...

$$a \div b = b \div a. \quad \text{Never}$$

but if  $a = b$  sometimes

11. If you divide 12 by a number, the answer will be less than 12. *Sometimes*

12. The square of a number is greater than the number.

Sometimes

$$\left(\frac{1}{4}\right)^2 \neq \frac{1}{4}$$

$$\frac{1}{16} \neq \frac{1}{4}$$

13.  $p + 12 = s + 12$

Sometimes

14.  $(n + 5)$  is less than 20

Sometimes

15.  $2(x + 3) = 2x + 3$

Never

16.  $3 + 2y = 5y$

Sometimes

17.  $4p$  is greater than  $9 + p$

Sometimes

18.  $2(3 + s) = 6 + 2s$

Always