

(Back side)

Cut out this box

Reflexive Property of Equality

Symmetric Property of Equality

Transitive Property of Equality

Addition Property of Equality

Subtraction Property of Equality

Multiplication Property of Equality

Division Property of Equality

Substitution Property of Equality

Distributive Property

ALGEBRAIC PROPERTIES OF EQUALITY

If a , then $a = a$

If $a = b$, then $b = a$

If $a = b$ and $b = c$, then $a = c$

If $a = b$, then $a + c = b + c$

If $a = b$, then $a - c = b - c$

If $a = b$, then $ac = bc$

If $a = b$, then $\frac{a}{c} = \frac{b}{c}$

If $a = b$, then you may replace b with a in any expression

$$a(b+c) = ab + ac$$

$$a(b-c) = ab - ac$$

Examples:

Examples:

Examples:

Examples:

Examples:

Examples:

Examples:

Examples:

Examples:

If $9x - 8 = 19$,
then $9x = 27$

If $9x - 8 = 19$,
then $9x = 27$

If $9x - 8 = 19$,
then $9x = 27$

If $7x = 35$,
then $x = 5$

If $7x = 35$,
then $x = 5$

If $7x = 35$,
then $x = 5$

If $KN = BR$,
then $BR = KN$

If $KN = BR$,
then $BR = KN$

If $KN = BR$,
then $BR = KN$

If $x = 2$ and $y = 2$,
then $x = y$

If $x = 2$ and $y = 2$,
then $x = y$

If $x = 2$ and $y = 2$,
then $x = y$

If $2(y+2) = 22$,
then $2y + 4 = 22$

If $2(y+2) = 22$,
then $2y + 4 = 22$

If $2(y+2) = 22$,
then $2y + 4 = 22$

If $3x + y = 8$ and
 $y = 2$, then $3x + 2 =$
 $\underline{\hspace{1cm}}$

If $3x + y = 8$ and
 $y = 2$, then $3x + 2 =$
 $\underline{\hspace{1cm}}$

If $3x + y = 8$ and
 $y = 2$, then $3x + 2 =$
 $\underline{\hspace{1cm}}$

If C , then
 $C = C$

If C , then
 $C = C$

If C , then
 $C = C$

If $2x + 5 = 12$,
then $2x = 7$

If $2x + 5 = 12$,
then $2x = 7$

If $2x + 5 = 12$,
then $2x = 7$

If $\frac{x}{3} = 2$, then
 $x = 6$

If $\frac{x}{3} = 2$, then
 $x = 6$

If $\frac{x}{3} = 2$, then
 $x = 6$

$$\text{If } \frac{a}{2} = 12, \text{ then} \\ a = 24$$

$$\text{If } \frac{a}{2} = 12, \text{ then} \\ a = 24$$

$$\text{If } \frac{a}{2} = 12, \text{ then} \\ a = 24$$

$$\text{If } a = 5 \text{ and} \\ b = 5, \text{ then } a = b$$

$$\text{If } a = 5 \text{ and} \\ b = 5, \text{ then } a = b$$

$$\text{If } a = 5 \text{ and} \\ b = 5, \text{ then } a = b$$

$$\text{If } p, \text{ then} \\ p = p$$

$$\text{If } p, \text{ then} \\ p = p$$

$$\text{If } p, \text{ then} \\ p = p$$

$$\text{If } 6x - 2 = 10, \\ \text{then } 6x = 12$$

$$\text{If } 6x - 2 = 10, \\ \text{then } 6x = 12$$

$$\text{If } 6x - 2 = 10, \\ \text{then } 6x = 12$$

$$\text{If } 8x = 32, \\ \text{then } x = 4$$

$$\text{If } 8x = 32, \\ \text{then } x = 4$$

$$\text{If } 8x = 32, \\ \text{then } x = 4$$

$$\text{If } 5z + 3x = 12 \text{ and} \\ z = 2, \text{ then } 5(2) \\ + 3x = 12$$

$$\text{If } 5z + 3x = 12 \text{ and} \\ z = 2, \text{ then } 5(2) \\ + 3x = 12$$

$$\text{If } 5z + 3x = 12 \text{ and} \\ z = 2, \text{ then } 5(2) \\ + 3x = 12$$

$$\text{If } 3x + 13 = 20, \\ \text{then } 3x = 7$$

$$\text{If } 3x + 13 = 20, \\ \text{then } 3x = 7$$

$$\text{If } 3x + 13 = 20, \\ \text{then } 3x = 7$$

$$\text{If } 3(y-2) = 12, \\ \text{then } 3y - 6 = 12$$

$$\text{If } 3(y-2) = 12, \\ \text{then } 3y - 6 = 12$$

$$\text{If } 3(y-2) = 12, \\ \text{then } 3y - 6 = 12$$

$$\text{If } QN = PR, \\ \text{then } PR = QN$$

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$$\text{If } QN = PR, \\ \text{then } PR = QN$$