Topic: Transitive Property

Question: What does the Transitive Property tell us about the set of equations?

$$y = 4x - 2$$

$$3z + 6 = y$$

Answer choices:

A $4x - 2 = 3z + 6$

B $4x - 2 = 3z$

C $y = 4x$

D $y = y$

Solution: A

We've been told that $y = 4x - 2$. If we turn this equation around (switch the left-hand side with the right-hand side), we get $4x - 2 = y$.

We've also been told that $3z + 6 = y$. If we turn this equation around, we get $y = 3z + 6$.

$$4x - 2 = y$$

$$y = 3x + 6$$

Since $4x - 2 = y$ and $y = 3x + 6$, the Transitive Property tells us that $4x - 2 = 3z + 6$.

Topic: Transitive Property

Question: What does the Transitive Property tell us about the set of equations?

$$3x = 2y - 5$$

$$7z + 4 = 2y - 5$$

Answer choices:

A $2y - 5 = 7z$

B $4 = 2y - 5$

C $3x = 7z + 4$

D $3x = 4$

Solution: C

We've been told that $7z + 4 = 2y - 5$. If we take this equation and turn it around (switch the left-hand side with the right-hand side), we get $2y - 5 = 7z + 4$. Now we can write the set of equations as

$$3x = 2y - 5$$

$$2y - 5 = 7z + 4$$

Since $3x = 2y - 5$ and $2y - 5 = 7z + 4$, the Transitive Property tells us that $3x = 7z + 4$.

Topic: Transitive Property

Question: Using the Transitive Property, choose the equation that would be the correct conclusion from the pair of equations.

$$w = r$$

$$r = b$$

Answer choices:

A $b = r$

B $b = b$

C $w = b$

D $r = w$

Solution: C

If we match the right side of $w = r$ to the left side of $r = b$, we see that we have matching values of r. If $w = r$ and $r = b$, then $w = b$.