

Do Now

Please work with your teammates on this Do Now. Thank you!



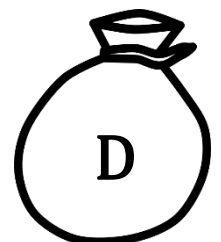
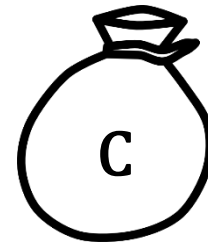
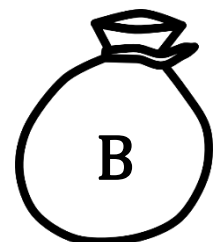
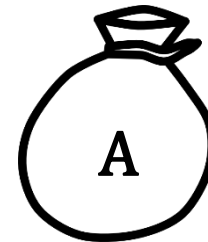
A total of 65 cookies are in four bags.

The bag with the fewest cookies has 4 cookies. Based on the following clues, how many cookies are in each bag?

Bag B contains $\frac{1}{3}$ as many as Bag D

Bag A contains 7 times as many as Bag B.

Bag C contains $\frac{3}{4}$ as many as Bag A.



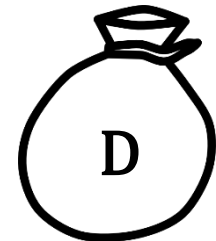
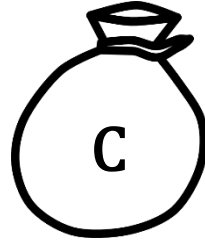
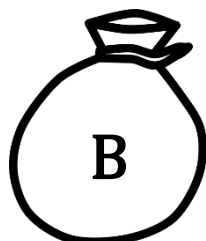
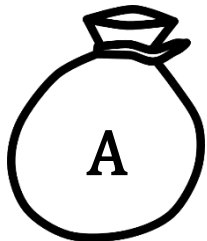
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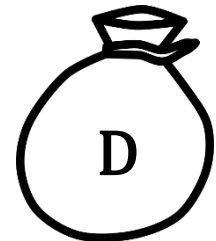
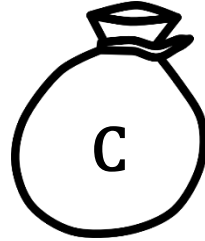
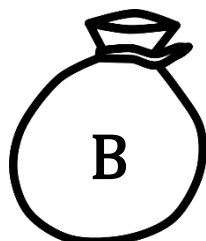
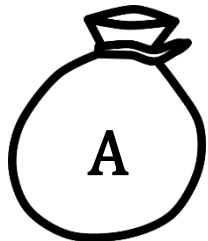
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Variables like to hide. As a mathematician,
it is your job to identify them.

$$3a + 11 = 47$$



Reciprocals: Two numbers whose product is 1.

Examples:

Property of Equality: If $a = b$, then $a + c = b + c$, and $ac = bc$.

Example: If $x = 5$, then $x + 2 = 5 + 2$, and $2x = 2(5)$.

Scale demo

Definition of Subtraction: Subtracting is the same as

adding the opposite.

Definition of Division: Dividing is the same as

multiplying by the reciprocal.

Deconstructing an equation to identify the variable value:

variable term constant term

$$2x + 6 = 14$$

coefficient

$$\frac{-6}{-6} \quad \frac{-6}{-6}$$

Property of Equality

$$2x + 0 = 8$$

Additive Inverse

$$\frac{2x}{2} = \frac{8}{2}$$

Additive Identity

Property of Equality

$$1x = 4$$

Multiplicative Inverse

$$x = 4$$

Multiplicative Identity



Verify: $2x + 6 = 14$

$$2(4) + 6 = 14 \quad \text{Substitution}$$

$$8 + 6 = 14 \quad \text{Substitution}$$

$$14 = 14 \quad \text{Reflexive Property}$$

Deconstructing an equation to identify the variable value:

$$\frac{z}{6} - 11 = 1$$

Verify: $\frac{z}{6} - 11 = 1$

Deconstructing an equation to identify the variable value:

$$\frac{1}{4}y + \frac{1}{3} = \frac{5}{12}$$

Verify:

$$\frac{1}{4}y + \frac{1}{3} = \frac{5}{12}$$