

Word Problems by Problem Type

Additive Situation

Change Problem Types: Have three parts, beginning quantity, the change amount, and the total amount after the change occurs.

Joining Problems [Add to]

Join (Result Unknown)	Join (Change Unknown)	Join (Start Unknown)
$4 + 3 = C$	$4 + S = 7$	$M + 4 = 7$
Mr. Smith had 4 cookies. Suzy gave him 3 more cookies. How many cookies does Mr. Smith have now?	Mr. Smith had 4 cookies. Suzy gave him some more. Then, Mr. Smith had 7 cookies. How many cookies did Suzy give Mr. Smith?	Mr. Smith had some cookies. Suzy gave him 4 more cookies. Then he had 7 cookies. How many cookies did Mr. Smith start with?

Separating Problems [Take From]

Separate (Result Unknown)	Separate (Change Unknown)	Separate (Start Unknown)
$7 - 4 = C$	$7 - S = 3$	$M - 4 = 3$
Mr. Smith had 7 cookies. He gave 4 of them to Suzy. How many cookies did Mr. Smith have left?	Mr. Smith had 7 cookies. He gave some to Suzy. Then, he had 3 cookies left. How many cookies did he give to Suzy?	Mr. Smith had some cookies. He gave 4 cookies to Suzy. Then he had 3 cookies left. How many cookies did Mr. Smith have to start?

Comparison Problems: Two quantities are compared. The difference between the two quantities is the third quantity in the problem.

Compare (Difference Unknown)	Compare (Quantity Unknown)	Compare (Referent Unknown- could be either the first or second)
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		quantity being compared)
$5 - 3 = M$ or $3 + M = 5$	$3 + 2 = M$	$8 - 5 = S$
Mr. Smith had 5 cookies. Suzy had 3 cookies. How many more cookies did Mr. Smith have than Suzy?	Mr. Smith had 3 cookies. Suzy had 2 more cookies than Mr. Smith. How many cookies did Suzy have?	Mr. Smith had 8 cookies. He had 5 more cookies than Suzy. How many cookies did Suzy have?
Part-Part-Whole Problems: Do not involve an action. Two parts make up a whole and there is no meaningful difference between parts. There are three types of part-part-whole where you solver for the unknown whole, and unknown part, or possible combinations of both parts.		
Part-Part-Whole (Whole Unknown) [Put Together]	Part-Part-Whole (Part Unknown) [Take Apart]	Part-Part-Whole (Both Parts Unknown) [Take Apart]
$6 + 3 = C$	$9 - 3 = W$ or $W + 3 = 9$	$9 = p + w$
Mr. Smith has 6 white cookies and 3 pink cookies. How many cookies does he have?	Mr. Smith has 9 cookies. 3 are pink and the rest are white. How many white cookies does Mr. Smith have?	Mr. Smith has 9 cookies. Some are pink and some are white. How many could be pink and how many could be white?
Multiplicative Situation		
Equal Group Problems [Equal Groups/ Arrays/ Area]		
Multiplication (Rate times a quantity- product unknown)	Measurement Division (Number of units or quantity unknown)	Partitive Division/Fair Share (unite rate or set size unknown)
$3 * 4 = C$	$12 \div 4 = B$ or $B * 4 = 12$	$12 \div 3 = C$ or $3 * C = 12$
Mr. Smith had 3 bages of cookies. There were 4 cookies in each bag. How many cookies did Mr. Smith have?	Mr. Smith had 12 cookies. He put 3 cookies in each box. How many boxes did he need?	Mr. Smith had 12 cookies and he wanted to give them to 3 friends. How many cookies did each friend get?

Multiplicative Compare Problems [Compare]

Compared Quantity Unknown	MC with a partial relation: compared quantity unknown	Referent quantity unknown
$17 * 5 = J$	$18 = 3 * B$	$P = 1/4 * 28$
Emily had 17 marbles. Julia has 5 times as many marbles as Emily. How many marbles does Julia have?	George made 18 baskets in the basketball game last night. He made 3 times as many baskets as Bob. How many baskets did Bob make?	Matty correctly solved 28 problems. Paul solved $1/4$ as many problems as Patty. How many problems did Paul solve?
Compared Multiplier (Scalar) Unknown		
$54 \div 9 = X$		
Eric has 9 video games. Bryan has 54 video games. How many times more video games does Bryan have than Eric?		