

Algebra I  
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14 quarters	∅
28 dimes	∅
7 - 25¢ stamps	∅ need total number of coins
8 - 40¢ stamps	∅
14, 16, 18, 20	∅

2) A child's bank contains \$6.30 in dimes and quarters. There are twice as many dimes as quarters. How many of each kind of coin are in the bank?


4) Kyle spent \$4.95 to buy 15 stamps in 25-cent and 40-cent values. How many of each kind of stamp did he buy?

$25x + 40(15-x) = 495$

25¢ stamp	$\frac{25 \text{ ¢}}{\text{Stamp}}$	x stamps	$25x \text{ ¢}$
40¢ stamp	$\frac{40 \text{ ¢}}{\text{Stamp}}$	15-x stamps	$40(15-x) \text{ ¢}$
			$495 \text{ ¢}$

Let x = # 25¢ stamps  
15-x = # 40¢ stamps

6) The average of four consecutive even integers is 17. Find the integers.


8) Jim's sandwich cost  $3x$  = + the combined cost of his salad and milk. The sandwich cost three times as much as the milk. The salad cost 20 cents more than twice the cost of the milk. How much did Jim's lunch cost?

*Problem cannot work as stated.*

sandwich	$\frac{3x \text{ ¢}}{\text{sandwich}}$		
salad	$\frac{2x+20 \text{ ¢}}{\text{salad}}$		
milk	$\frac{x \text{ ¢}}{\text{milk}}$		

Let x = cost milk

$3x = (2x+20) + (x)$   
 $3x = 3x + 20$   
 $0 = 20$   
 $\emptyset$

10) Janet has \$8.55 in nickels, dimes, and quarters. She has 7 more dimes than nickels and quarters combined. How many of each coin does she have?

Missing information

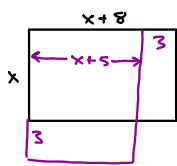
Nothing relates the nickels and dimes to the quarters. If we knew the total number of coins, we could make it work.

nickels	x	5	$5x$
dimes	$2x+7$	10	$10(2x+7)$
quarters		25	

Let x = nickels

$\emptyset$

12) A rectangle is 8 cm longer than it is wide. If the width is increased by 3 cm and the length is decreased by 3 cm, the area is increased by 4 cm<sup>2</sup>. Find the dimensions of the original rectangle.



	w	l	A
rectangle	x	x+8	$x(x+8)$
	x+3	x+5	$(x+3)(x+5)$

Let  $x = \text{width}$

$$(x+3)(x+5) = x(x+8) + 4$$

$$x^2 + 5x + 3x + 15 = x^2 + 8x + 4$$

$$8x + 15 = 8x + 4$$

$$15 = 4$$

False

∅