Algebra 1 Bellwork Thursday, October 16, 2014

1. Four consecutive odd numbers have a sum of –376. Write and solve an equation to find these odd numbers. Make sure you show your equation and your work.

2. The perimeter of a rectangle is 138 cm. The length is nine less than five times the width. Write and solve an equation to find the dimensions of the rectangle. Make sure you show your equation and your work.

3. One Friday you drove to a college campus for a visit then returned on Sunday. You drove 60 mph on Friday but due to traffic could only drive 45 mph on Sunday. The total time you spent driving was 14 hours. Write and solve an equation to find the amount of time you spent driving on Sunday. Make sure you show your equation and your work.

4. Two planes take off from the same airport flying in opposite directions. The plane flying North flew 120 mph. Two hours later the plane flying South took off flying 140 mph. When the two planes landed they were 1410 miles apart. Write and solve an equation to find the amount of time the Southbound plane was flying. Make sure you show your equation and your work.

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Answers

1. Four consecutive odd numbers have a sum of –376. Write and solve an equation to find these odd numbers. Make sure you show your equation and your work.

$x + (x+2) + (x+4) + (x+6) = -376$

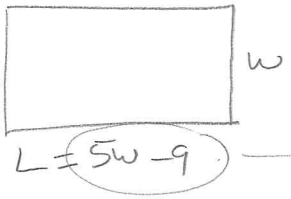
$4x + 12 = -376$

$4x = -388$

$x = -97$

-97, -95, -93, -91

2. The perimeter of a rectangle is 138 cm. The length is nine less than five times the width. Write and solve an equation to find the dimensions of the rectangle. Make sure you show your equation and your work.



$P = 2L + 2w$

$138 = 2L + 2w$

$138 = 2(5w - 9) + 2w$

$138 = 10w - 18 + 2w$

$138 = 12w - 18$

$156 = 12w$

$w = 13$

$L = 5(13) - 9$

$L = 56$

Dimensions

13 x 56 or

56 x 13

3. One Friday you drove to a college campus for a visit then returned on Sunday. You drove 60 mph on Friday but due to traffic could only drive 45 mph on Sunday. The total time you spent driving was 14 hours. Write and solve an equation to find the amount of time you spent driving on Sunday. Make sure you show your equation and your work.

	d =	r ·	t
Fri	60t	60	t
Sun	45(14-t)	45	14-t

distances are =

$60t = 45(14 - t)$

$60t = 630 - 45t$

$+45t \quad +45t$

$105t = 630$

$t = 6$

Sun: $14 - 6 = 8$ hr

Sunday → 8 hrs

4. Two planes take off from the same airport flying in opposite directions. The plane flying North flew 120 mph. Two hours later the plane flying South took off flying 140 mph. When the two planes landed they were 1410 miles apart. Write and solve an equation to find the amount of time the Southbound plane was flying. Make sure you show your equation and your work.

	d	r	t
N	120t	120	t
S	140(t-2)	140	t-2

$120t + 140(t-2) = 1410$

$120t + 140t - 280 = 1410$

$260t - 280 = 1410$

$260t = 1690$

$t = 6.5$

South plane = $6.5 - 2 = 4.5$ hrs

Southband plane flew for 4.5 hrs