

# Stroop Test - Results Sheet

Show your work for all calculations.

Record your results using the chart below, rounding to the nearest second. Show all of your work for each calculation.

The "congruent test" is the test in which the color of each printed word matches that word's meaning. The "incongruent test" is the test in which the color of the printed word and the word's meaning do NOT match.

Participant	Female #1	Female #2	Male #1	Male #2
Congruent Test Time	8.60= <b>9</b>	8.44= <b>8</b>	12.36= <b>12</b>	7.93= <b>8</b>
Incongruent Test Time	21.12= <b>21</b>	27.42= <b>27</b>	28.45= <b>28</b>	22.99= <b>23</b>

1. Calculate the average (mean) time for each group.

Group	One—Female	Two—Male
Average Congruent Time	$8.60 + 8.44 = 17.04$ $17.04/2 = 8.52$ $8.52 = \mathbf{9}$	$12.36 + 7.93 = 20.29$ $20.29/2 = 10.14$ $10.14 = \mathbf{10}$
Average Incongruent Time	$21.12 + 27.42 = 48.54$ $48.54/2 = 24.27$ $24.27 = \mathbf{24}$	$28.45 + 22.99 = 51.44$ $51.44/2 = 25.72$ $25.72 = \mathbf{26}$

2. Calculate the average (mean) time for each group, regardless of congruency. **Note:** Use the original data from the chart at the top of the page. DO NOT use the averages calculated in problem number one.

Group One—Female	Group Two—Male
$8.52 + 24.27 = 32.79$	$10.14 + 25.72 = 35.86$

$$32.79/2 = \mathbf{16.39}$$

$$35.86/2 = \mathbf{17.93}$$



3. Using the average (mean) time for each group found above, what is the ratio of completion times of Group One to Group Two?

	Ratio
Ratio of congruent completion times	9:10
Ratio of incongruent completion times	24:26

4. True or False: The ratio of completion times of Group One to Group Two (in question 3) is the same for the two time conditions (congruent and incongruent). Explain.

$$9/10 = 24/26$$

$$26 \cdot 9 = 234$$

$$10 \cdot 24 = 240$$

False. when comparing the two fractions, they don't come out equal

5. Answer the following questions; show your work for each calculation:

- If group 1 repeated the experiment and completed in  $1/3$  of the time as the original, how long did it take group 1?
- If group 2 repeated the experiment and completed in  $1/5$  of the time as the original, how long did it take group 2?
- In the repeated experiment, what is the ratio of completion for group 1 to group 2?
- Compare that to the ratio from question 3, how do the ratios differ?

A. Group 1:  $16 \cdot \frac{1}{3} = 5.33 = 5$

B. Group 2:  $18 \cdot \frac{1}{5} = 3.6 = 4$

C. 5:4

D. The two top numbers that represent females (9 and 24) are smaller than the two bottom numbers which represent the males (10 and 26) for each condition (congruent/ incongruent). The congruent ratio has a difference ( $9/10 = .9$ ) that is



smaller than the incongruent ratio difference ( $24/26 = .92$ ). Compared to the first experiment, those ratios are smaller than the ratio of the repeated experiment (group 1:  $5.33 = 5$  ; group 2:  $3.6 = 4$ .  $5/4 = 1.25$ )

6. Answer the following questions; set these up as proportions and show your work for each calculation:

- A. Given 25 words, what is the rate of completion for the congruent test for yourself?
- B. What is the rate of completion for the incongruent test for yourself?
- C. Using that same rate, how long would it take you to complete a Stroop test with 68 words for the congruent test and the incongruent test?

A. 25 words =  $8.13 = 8$

B. 25 words =  $20.37 = 20$

C. Congruent:  $25/8.13 = 68/X$

$$25X = 68(8)$$

$$25X = 544$$

$$544/25 = 21.76$$

$$= 22 \text{ seconds}$$

Incongruent:  $25/20.37 = 68/X$

$$25X = 68(20)$$

$$25X = 1360$$

$$1360/25 = 54.4$$

$$X = 54$$

$$= 54 \text{ seconds}$$



7. Answer the following questions; set these up as proportions and show your work for each calculation:

- A. Assuming the proportion of completed words per second (congruent and incongruent) stays the same as in problem two, how many words would each group (female and male) complete in 40 seconds?
- B. In 1 minute?

A.

25 words (**male average**) = 17.93 = 18

$$25X = 40(18)$$

$$25X = 720$$

$$720/25$$

$$X = 28.8 = 29 \text{ words}$$

25 words (**female average**) = 16.39 = 16

$$25X = 40(16)$$

$$25X = 640$$

$$640/25$$

$$X = 25.6 = 26 \text{ words}$$

B.

25 words (**male average**)

$$25X = 60(18)$$

$$25X = 1080$$

$$1080/25$$

$$43.2 = 43 \text{ words}$$

25 words (**female average**)

$$25X = 60(16)$$

$$25X = 960$$

$$960/25$$

$$38.4 = 38 \text{ words}$$



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