



## Handout - Social Network Math (Teacher's Guide)

Beyoncé's preferred social media platform is Instagram. Her posts have set records for the number of likes they have received and the account is consistently one of the most followed on the platform. Determine the depth of her audience's engagement by working through the following questions.

### Questions

1. What are Beyoncé's Social Media Ratios?

a. What is the number of Followers on Beyoncé's account?

209M as of September 2021

b. What is the average number of Likes per post on Beyoncé's account?

3M as of September 2021

d. What is the ratio of Likes to Followers for the account? Use the Classic formula to write this ratio.

Likes : Followers = 3M Likes per post : 209M Followers

Ratio in fraction form =  $3M/209M$

Percentage =  $0.01435407 \times 100$

e. What's the engagement rate of Likes to Followers as a percentage?

Percentage =  $0.01435407 \times 100 = 1.4\%$

f. What is the average number of Comments per post on Beyoncé's account?

Teacher's Guide: 25K as of September 2021

g. What is the ratio of Comments to Likes for the account? Use the Advanced formula to write this ratio.

Comments : Likes = 25K comments per post : 3M Likes per post

Ratio in fraction form =  $25K/3M$

Percentage =  $0.00833333 \times 100$

h. What's the engagement rate of Comments to Likes?

$$\text{Percentage} = 0.00833333 \times 100 = 0.8\%$$

2. What are Instagram's Social Media Ratios?

a. What is the number of Followers on Instagram's account?

423M as of September 2021

b. What is the average number of Likes per post on Instagram's account?

213K as of September 2021

c. What is the ratio of Likes to Followers for the account? Use the Classic formula to write this ratio.

Likes : Followers = 213K Likes per post : 423M Followers

Ratio in fraction form =  $213K/423M$

$$\text{Percentage} = 0.00050355 \times 100$$

d. What is the engagement rate of Likes to Followers as a percentage?

$$\text{Percentage} = 0.00050355 \times 100 = 0.05\%$$

e. What is the average number of Comments per post on Instagram's account?

7K as of September 2021

f. What is the ratio of Comments to Likes for the account? You will use the Advanced formula to write this ratio.

Comments : Followers = 7K comments per post : 213K Likes per post

Ratio in fraction form =  $7K/213K$

$$\text{Percentage} = 0.03286385 \times 100$$

g. What's the engagement rate of Comments to Likes?

$$\text{Percentage} = 0.03286385 \times 100 = 3.3\%$$



### 3. Comparing Instagram and Beyoncé.

a. Looking at the ratio of Likes to Followers is one way to identify which account may have the higher percentage of audience engagement. Which account has the highest percentage of Likes?

(Engagement rate of Likes to Followers: Beyoncé 1.4% vs 0.05% Instagram  
Engagement rate of Comments to Likes: Beyoncé 0.8% vs 3.3% Instagram)

Beyoncé's

b. Looking at the ratio of Comments to Likes is a way to determine engagement. Which account has the highest percentage of Comments?

Instagram's

c. Based on the answers to the ratios you wrote and solved, which account has the deeper audience engagement? Why?

Instagram's. The account's audience is engaging more deeply due to the higher percentage of direct interaction (Comments) and reaches (Likes) for each post.

