

Blue dots in cluster 1:

- Precision =  $\frac{4}{7} = 0.571$
- Recall =  $\frac{4}{8} = 0.5$
- F-score =  $\frac{8}{15} = 0.533$

Red dots in cluster 1:

- Precision =  $\frac{2}{7} = 0.286$
- Recall =  $\frac{2}{11} = 0.182$
- F-score =  $\frac{2}{9} = 0.222$

Green dots in cluster 1:

- Precision =  $\frac{1}{7} = 0.143$
- Recall =  $\frac{1}{7} = 0.143$
- F-score =  $\frac{1}{7} = 0.143$

Blue dots in cluster 2:

- Precision =  $\frac{2}{7} = 0.286$
- Recall =  $\frac{1}{4} = 0.25$
- F-score =  $\frac{4}{15} = 0.267$

Red dots in cluster 2 = Red dots in cluster 1

Green dots in cluster 2:

- Precision =  $\frac{3}{7} = 0.429$
- Recall =  $\frac{3}{7} = 0.429$
- F-score =  $\frac{3}{7} = 0.429$

Blue dots in cluster 3:

- Precision =  $\frac{1}{6} = 0.167$
- Recall =  $\frac{1}{8} = 0.125$
- F-score =  $\frac{1}{7} = 0.143$

Red dots in cluster 3:

- Precision =  $\frac{5}{6} = 0.833$
- Recall =  $\frac{5}{11} = 0.455$
- F-score =  $\frac{10}{17} = 0.588$

Blue dots in cluster 4 = Blue dots in cluster 3

Red dots in cluster 4:

- Precision =  $\frac{2}{6} = 0.333$
- Recall =  $\frac{2}{11} = 0.182$
- F-score =  $\frac{4}{17} = 0.235$

Green dots in cluster 4:

- Precision =  $\frac{3}{6} = 0.5$
- Recall =  $\frac{3}{7} = 0.429$
- F-score =  $\frac{6}{13} = 0.422$

$$\text{B-CUBED Precision} = \frac{127}{273} = 0.465$$

$$\text{B-CUBED Recall} = \frac{2719}{8008} = 0.3395$$

$$\text{B-CUBED F-score} = 0.3872$$