S.ID.B.5: Frequency Tables 2

1 A middle school conducted a survey of students to determine if they spent more of their time playing games or watching videos on their tablets. The results are shown in the table below.

	Playing Games	Watching Videos	Total
Boys	138	46	184
Girls	54	142	196
Total	192	188	380

Of the students who spent more time playing games on their tablets, approximately what percent were boys?
1) 41
2) 56
3) 72
4) 75

2 Jenna took a survey of her senior class to see whether they preferred pizza or burgers. The results are summarized in the table below.

	Pizza	Burgers
Male	23	42
Female	31	26

Of the people who preferred burgers, approximately what percentage were female?
1) 21.3
2) 38.2
3) 45.6
4) 61.9

3 Students were asked to name their favorite sport from a list of basketball, soccer, or tennis. The results are shown in the table below.

	Basketball	Soccer	Tennis
Girls	42	58	20
Boys	84	41	5

What percentage of the students chose soccer as their favorite sport?
1) 39.6%
2) 41.4%
3) 50.4%
4) 58.6%

4 Mrs. Smith's math class surveyed students to determine their favorite flavors of soft ice cream. The results are shown in the table below.

	Chocolate	Vanilla	Twist
Juniors	42	27	45
Seniors	67	42	21

Of the students who preferred chocolate, approximately what percentage were seniors?
1) 27.5
2) 44.7
3) 51.5
4) 61.5

5 A survey of students at West High School was taken to determine a theme for the prom. The results of the survey are summarized in the table below.

	Beach Party	Hollywood	Broadway
Girls	86	112	68
Boys	123	77	79

Approximately what percentage of the students who chose the Broadway theme were girls?

1) 26
2) 27
3) 46
4) 68

6 A survey was given to 12th-grade students of West High School to determine the location for the senior class trip. The results are shown in the table below.

	Niagara Falls	Darien Lake	New York City
Boys	56	74	103
Girls	71	92	88

To the *nearest percent*, what percent of the boys chose Niagara Falls?

1) 12
2) 24
3) 44
4) 56

7 A public opinion poll was taken to explore the relationship between age and support for a candidate in an election. The results of the poll are summarized in the table below.

Age	For	Against	No Opinion
21-40	30	12	8
41-60	20	40	15
Over 60	25	35	15

What percent of the 21-40 age group was for the candidate?

1) 15
2) 25
3) 40
4) 60

8 A radio station did a survey to determine what kind of music to play by taking a sample of middle school, high school, and college students. They were asked which of three different types of music they prefer on the radio: hip-hop, alternative, or classic rock. The results are summarized in the table below.

	Hip-Hop	Alternative	Classic Rock
Middle School	28	18	4
High School	22	22	6
College	16	20	14

What percentage of college students prefer classic rock?

1) 14%
2) 28%
3) 33%
4) 58%

9   At Berkeley Central High School, a survey was conducted to see if students preferred cheeseburgers, pizza, or hot dogs for lunch. The results of this survey are shown in the table below.

	Cheeseburgers	Pizza	Hot Dogs
Females	32	44	24
Males	36	30	34

Based on this survey, what percent of the students preferred pizza?
1) 30   3) 44
2) 37   4) 74

10   Some adults were surveyed to find out if they would prefer to buy a sports utility vehicle (SUV) or a sports car. The results of the survey are summarized in the table below.

	SUV	Sports Car	Totals
Male	21	38	59
Female	135	46	181
Totals	156	84	240

Of the number of adults that preferred sports cars, approximately what percent were males?
1) 15.8   3) 64.4
2) 45.2   4) 82.6

11   An outdoor club conducted a survey of its members. The members were asked to state their preference between skiing and snowboarding. Each member had to pick one. Of the 60 males, 45 stated they preferred to snowboard. Twenty-two of the 60 females preferred to ski. What is the relative frequency that a male prefers to ski?
1) 0.125   3) $0.\overline{333}$
2) 0.25   4) $0.\overline{405}$

12   The sixth-grade classes at West Road Elementary School were asked to vote on the location of their class trip. The results are shown in the table below.

	Playland	Splashdown	Fun Central
Boys	38	53	25
Girls	39	46	37

Determine, to the *nearest percent*, the percentage of girls who voted for Splashdown.

13   The school newspaper surveyed the student body for an article about club membership. The table below shows the number of students in each grade level who belong to one or more clubs.

	1 Club	2 Clubs	3 or More Clubs
9th	90	33	12
10th	125	12	15
11th	87	22	18
12th	75	27	23

If there are 180 students in ninth grade, what percentage of the ninth grade students belong to more than one club?

14 A statistics class surveyed some students during one lunch period to obtain opinions about television programming preferences. The results of the survey are summarized in the table below.

Programming Preferences		
	Comedy	Drama
Male	70	35
Female	48	42

Based on the sample, predict how many of the school's 351 males would prefer comedy. Justify your answer.

15 A survey of 100 students was taken. It was found that 60 students watched sports, and 34 of these students did not like pop music. Of the students who did *not* watch sports, 70% liked pop music. Complete the two-way frequency table.

	Watch Sports	Don't Watch Sports	Total
Like Pop			
Don't Like Pop			
Total			

16 A survey of 150 students was taken. It was determined that $\frac{2}{3}$ of the students play video games. Of the students that play video games, 85 also use social media. Of the students that do not play video games, 20% do not use social media. Complete the two-way frequency table.

	Play Video Games	Do Not Play Video Games	Total
Social Media			
No Social Media			
Total			

17 Julia surveyed 150 of her classmates at City Middle School to determine their favorite animals. Of the 150 students, 46% were male. Forty-two students said their favorite animal was a horse, and of those students were female. Of the 60 students who said dolphins were their favorite animal, 30% were male. Using this information, complete the two-way frequency table below.

	Horse	Dolphin	Penguin	Total
Male				
Female				
Total				

S.ID.B.5: Frequency Tables 2
Answer Section

1 ANS: 3

$$\frac{138}{192} \approx 72\%$$

REF: 012010ai

2 ANS: 2

$$\frac{26}{42+26} = 0.382$$

REF: 061912ai

3 ANS: 1

$$\frac{58+41}{42+58+20+84+41+5} = \frac{99}{250} = 0.396$$

REF: 061809ai

4 ANS: 4

$$\frac{67}{42+67} \approx 0.615$$

REF: 012409ai

5 ANS: 3

$$\frac{68}{68+79} \approx 0.46$$

REF: 082414ai

6 ANS: 2

$$\frac{56}{56+74+103} \approx 0.24$$

REF: 081906ai

7 ANS: 4

$$\frac{30}{30+12+8} = 0.6$$

REF: 061615ai

8 ANS: 2

$$\frac{14}{16+20+14} = 28\%$$

REF: 011705ai

9 ANS: 2

$$\frac{44+30}{32+44+24+36+30+34} = 37\%$$

REF: 082212ai

10 ANS: 2

$$\frac{38}{84} \approx 45.2\%$$

REF: 062317ai

11 ANS: 2

$$\frac{60 - 45}{60} = \frac{15}{60} = \frac{1}{4}$$

REF: 081814ai

12 ANS:

$$\frac{46}{39 + 46 + 37} \approx 38\%$$

REF: 012326ai

13 ANS:

$$\frac{33 + 12}{180} = 25\%$$

REF: 011526ai

14 ANS:

$$\frac{m}{351} = \frac{70}{70 + 35}$$

$$105m = 24570$$

$$m = 234$$

REF: 011630ai

15 ANS:

	Watch Sports	Don't Watch Sports	Total
Like Pop	26	28	54
Don't Like Pop	34	12	46
Total	60	40	100

REF: 061729ai

16 ANS:

	Play Video Games	Do Not Play Video Games	Total
Social Media	85	40	125
No Social Media	15	10	25
Total	100	50	150

REF: 062428ai

17   ANS:

	Horse	Dolphin	Penguin	Total
Male	28	18	23	69
Female	14	42	25	81
Total	42	60	48	150

REF: 082326ai