

WORKSHEET ANSWER KEY

Student Worksheet 1: Stardom: Just a Fraction Away

- $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1$
 $0.25 + 0.25 + 0.25 + 0.25 = 1$
 $25\% + 25\% + 25\% + 25\% = 100\%$

	Fraction	Decimal	Percent
Pepperoni	$\frac{8}{16}$ or $\frac{1}{2}$	0.5	50%
Sausage	$\frac{4}{16}$ or $\frac{1}{4}$	0.25	25%
Onion	$\frac{2}{16}$ or $\frac{1}{8}$	0.125	12.5%
Broccoli or Cheese Only	$\frac{1}{16}$	0.0625	6.25%
Pepperoni and Sausage	$\frac{12}{16}$ or $\frac{3}{4}$	0.75	75%
Onion and Broccoli	$\frac{3}{16}$	0.1875	18.75%

	Fraction	Decimal	Percent
Band: \$6	$\frac{6}{16}$ or $\frac{3}{8}$	0.375	37.5%
Record Label: \$4	$\frac{4}{16}$ or $\frac{1}{4}$	0.25	25%
Record Store: \$3	$\frac{3}{16}$	0.1875	18.75%
Producer: \$2	$\frac{2}{16}$ or $\frac{1}{8}$	0.125	12.5%
Manager Ralph: \$1	$\frac{1}{16}$	0.0625	6.25%
Total: \$16	$\frac{16}{16}$ or 1	1.00	100%

BONUS: The band is now getting $\frac{3}{8}$ of \$20 or \$7.50.

Bonus Worksheet 1: Ratio Radio

- To figure out how many songs of each type of song The Conversions should play in an hour-long set, students need to set up a proportion with each ratio (or fraction) in the Ratio Radio chart.

	Songs Per Hour	Fraction	Decimal	Percent
Fast Rock:	$\frac{144}{24} = x/1$ or 6	$\frac{1}{2}$	0.5	50%
Slow Rock:	$\frac{72}{24} = x/1$ or 3	$\frac{1}{4}$	0.25	25%
Rap:	$\frac{48}{24} = x/1$ or 2	$\frac{1}{6}$	0.166	16.6%
Country Crossover:	$\frac{24}{24} = x/1$ or 1	$\frac{1}{12}$	0.083	8.3%

- 5 minutes
- $40 \div 5 = 8$. (8 additional songs.)
- 4 fast and 2 slow

Student Worksheet 2: Rock to the Top with Decimals

	Decimal	Fraction	Percent
Band seats:	0.3	$\frac{3}{10}$	30%
Ralph's seat:	0.1	$\frac{1}{10}$	10%
Dog seats	0.2	$\frac{2}{10}$ or $\frac{1}{5}$	20%
Friend seats:	0.4	$\frac{4}{10}$ or $\frac{2}{5}$	40%
Total: 10 seats	1.0	$\frac{10}{10}$ or $\frac{1}{1}$	100%

	Decimal	Fraction	Percent
Giveaways:	0.22	$\frac{22}{100}$ or $\frac{11}{50}$	22%
Friends:	0.12	$\frac{12}{100}$ or $\frac{3}{25}$	12%
Tickets for sale:	0.66	$\frac{66}{100}$ or $\frac{33}{50}$	66%

	Decimal	Fraction	Percent
Deejays:	0.125	$\frac{125}{1000}$ or $\frac{1}{8}$	12.5%
Out-of-town fans:	0.248	$\frac{248}{1000}$ or $\frac{31}{125}$	24.8%
Local fans:	0.627	$\frac{627}{1000}$	62.7%

- BONUS:**
- 200 people: 20%; $\frac{2}{10}$ or $\frac{1}{5}$
 - 50 people: 5%; $\frac{5}{100}$ or $\frac{1}{20}$
 - 1 person: 0.1%; $\frac{1}{1000}$

Bonus Worksheet 2: Driving with Decimals/Mapping with Proportions

- $1.0/100 = 2.1/x$. $100 \times 2.1 = 210$ miles.
- $1.0/100 = 0.9/x$. $100 \times 0.9 = 90$ miles.
- $1.0/100 = 1.8/x$. $100 \times 1.8 = 180$ miles.
- To figure out how many hours it takes between cities at 60 mph, divide the total number of miles in questions 1–3 by 60.
 New York to Boston: 3.5 hours ($\frac{210}{60}$)
 Boston to Hartford: 1.5 hours ($\frac{90}{60}$)
 Hartford to Philadelphia: 3 hours ($\frac{180}{60}$)

Extra Bonus: $\frac{1}{1.02} = x/800$. $x = \$784$.

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WORKSHEET ANSWER KEY (continued from previous page)

Student Worksheet 3: Show Me the Money with Percents

1. The Band's Average Monthly Budget

INCOME	Per Month	Percent	Decimal	Fraction
Shows	\$250	62.5%	0.625	250/400 or 5/8
CD Sales	\$100	25%	0.25	100/400 or 1/4
T-Shirt Sales	\$50	12.5%	0.125	50/400 or 1/8
Total	\$400	100%	1.000	400/400 or 1/1
EXPENSES	Per Month	Percent	Decimal	Fraction
Rehearsal Room	-\$100	40%	0.40	100/250 or 2/5
Equipment and Insurance	-\$60	24%	0.24	60/250 or 6/25
Touring Van (gas/repairs)	-\$65	26%	0.26	65/250 or 13/50
Publicity (posters, etc.)	-\$25	10%	0.10	25/250 or 1/10
Total	-\$250	100%	1.00	250/250 or 1/1

2. $\$400 - \$250 = \$150$

3. \$150 is 37.5% of \$400; 0.375; 150/400 or 3/8

4. Money for monkeys: $\$150 \times 0.25 = \37.50
Money for savings: \$112.50

5. The answer is to convert 37.5% to $\frac{3}{8}$. Also, express the answer as a decimal: 0.375.

BONUS: Income from shows becomes \$300. Total income becomes \$450. $\frac{300}{450} = \frac{2}{3}$ or $0.\overline{6}$ or $66.\overline{6}\%$.

Bonus Worksheet 3: Time and Money— It's a Matter of Math

1. 40%; 0.40; $\frac{2}{5}$

2. 60%; 0.60; $\frac{3}{5}$

3. 12.5%; 0.125; $\frac{1}{8}$

4. A full house would mean 100% full. The proportion is $\frac{42}{70}$ (or $\frac{6}{10}) = \frac{x}{100}$. The answer is 60 people. If the house is 105% full, then the proportion is $\frac{100}{60}$ (or $\frac{5}{3}) = \frac{105}{x}$. The answer is 63 people. A more simple solution is $1.05 \times 60 = 63$.