WORKSHEET ANSWER KEY

Student Worksheet 1: Stardom: Just a Fraction Away

1. 1/4 + 1/4 + 1/4 + 1/4 = 1
0.25 + 0.25 + 0.25 + 0.25 = 1
25% + 25% + 25% + 25% = 100%

2.

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

3.

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

BONUS: The band is now getting 3/8 of $20 or $7.50.

Bonus Worksheet 1: Ratio Radio

1. 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:	$144/24 = x/1$ or 6	1/2	0.5	50%
Slow Rock:	$72/24 = x/1$ or 3	1/4	0.25	25%
Rap:	$48/24 = x/1$ or 2	1/6	$0.16\bar{6}$	$16.\bar{6}$%
Country Crossover:	$24/24 = x/1$ or 1	1/12	$0.08\bar{3}$	$8.\bar{3}$%

2. 5 minutes

3. 40 ÷ 5 = 8. (8 additional songs.)

4. 4 fast and 2 slow

Student Worksheet 2: Rock to the Top with Decimals

1.

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

2.

	Decimal	Fraction	Percent
Giveaways:	0.22	22/100 or 11/50	22%
Friends:	0.12	12/100 or 3/25	12%
Tickets for sale:	0.66	66/100 or 33/50	66%

3.

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

BONUS: **a.** 200 people: 20%; 2/10 or 1/5
b. 50 people: 5%; 5/100 or 1/20
c. 1 person: 0.1%; 1/1000

Bonus Worksheet 2: Driving with Decimals/Mapping with Proportions

1. $1.0/100 = 2.1/x$. 100 x 2.1 = 210 miles.

2. $1.0/100 = 0.9/x$. 100 x 0.9 = 90 miles.

3. $1.0/100 = 1.8/x$. 100 x 1.8 = 180 miles.

4. 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 (210/60)
Boston to Hartford: 1.5 hours (90/60)
Hartford to Philadelphia: 3 hours (180/60)

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

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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 x 0.25 = $37.50
Money for savings: $112.50

5. The answer is to convert 37.5% to 3/8. Also, express the answer as a decimal: 0.375.

BONUS: Income from shows becomes $300. Total income becomes $450. 300/450 = 2/3 or $0.6\bar{6}$ or $66.\bar{6}$%.

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

1. 40%; 0.40; 2/5

2. 60%; 0.60; 3/5

3. 12.5%; 0.125; 1/8

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