

Unit 2: Ratios and Proportional Reasoning

Name Key P

Study Guide

1. Write an equivalent ratio to 2:3. 6:9

2. The ratio of boys to girls in a class is 3:4. If there are 42 students in the class, how many are boys? 24 boys

3. Write the rate as a unit rate: \$48 for 4 tickets. \$12 per ticket

4. Joe drove 215 miles in 3 hours. Moe drove 240 miles in 4 hours. Who drove at the fastest rate of speed? Joe

How fast was each person driving? Joe 71.67 Moe 60

5. Each table below represents a proportional relationship. Complete the tables by filling in the missing values.

x	y
2	3
4	6
6	9
8	12
10	15

x	y
1	5
5	25
6	30
30	150
45	225

x	y
3	4
21	28
6	8
12	16
9	12

x	y
2	7
8	28
12	42
16	56
18	63

6. The prices of 4 different bottles of shampoo are given in the table. Which bottle size is the best value? 15oz

	Size	Price
A	24 oz.	\$4.50
B	15 oz	\$2.30
C	8 oz.	\$1.60
D	4 oz.	\$0.95

$$A: \frac{\$4.50}{24 \text{ oz}} = \frac{0.1875}{1 \text{ oz}}$$

$$B: \frac{\$2.30}{15 \text{ oz}} = \frac{0.1533}{1 \text{ oz}}$$

$$C: \frac{\$1.60}{8 \text{ oz}} = \frac{0.2}{1 \text{ oz}}$$

$$D: \frac{\$0.95}{4 \text{ oz}} = \frac{0.2375}{1 \text{ oz}}$$

7. Determine the missing value. $\frac{16}{20} = \frac{x}{180}$

$$x = 144$$

8. The table below shows the number of each item sold at the concession stand. What might the ratio 3:2 represent?

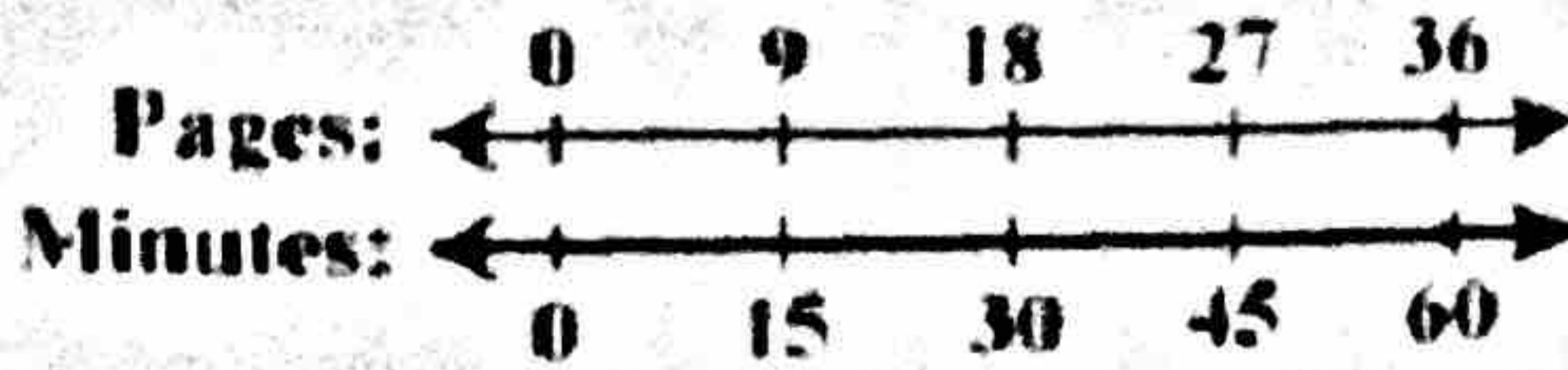
Candy bar to
Popcorn

Item	Quantity Sold
Popcorn	20
Nachos	15
Hot Dog	25
Candy Bar	30

9. Using the same table above, what is the ratio of hot dogs to popcorn? 5:4

10. What is the ratio of Nachos to all food items? 1 to 6

Use the double number line below to answer questions 15-18.



11. How long will it take to read 27 pages? 45 min

12. How many pages can be read in 15 minutes? 9 pages

13. How long will it take to read 90 pages? ~~150 min~~ 150 min

$$\frac{18 \text{ min}}{9 \text{ pg}} = \frac{150 \text{ min}}{90 \text{ pg}}$$

14. How many pages can be read in 2 hours? 72 pg

$$\frac{36 \text{ pg}}{60 \text{ min}} = \frac{? \text{ pg}}{120 \text{ min}}$$

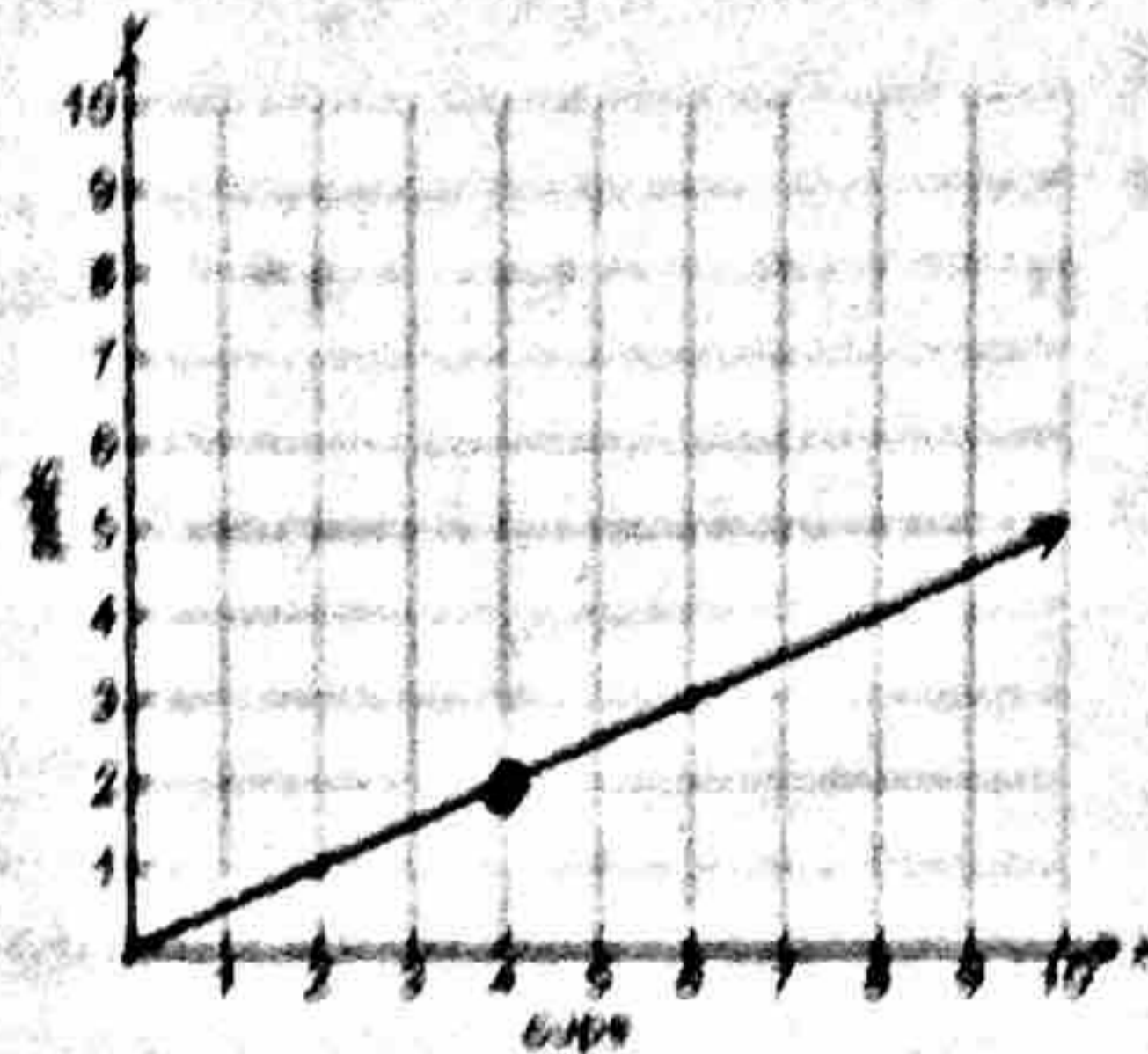
15. The table below shows the cost of varying number of books. If the relationship stays the same, determine the value of n .

Number of Books	Cost
3 .8	\$24
5 .8	\$40
12 .8	\$96
20 .8	n

$$n = \$160$$

16. The graph below compares cups to pints. Which of the following ordered pairs would also satisfy this relationship?

(x, y)



- A. (4, 2) B. (2, 4) C. (2, 0) D. (1, 2)

17. Thirteen is 25% of what number? 52

$$\frac{13}{x} = \frac{25}{100} \quad \frac{13}{x} = \frac{1}{4}$$

18. Find 15% of 32. 48

$$.15 \cdot 32$$

19. If in a class of 40 students, 45% are in Band, how many students are in Band?

$$\frac{45}{100} = \frac{x}{40} \quad \frac{9}{20} = \frac{x}{40}$$

18 students are in band.

20. Ann deposits 20% of her earning each week into her savings account. If she deposited \$17 this week, how much did she earn? 85

$$\frac{17}{x} = \frac{20}{100} \quad \frac{17}{x} = \frac{1}{5}$$

21. If 1 inch is approximately 2.54 centimeters, about how many centimeters are equal in length to 1 foot? 30.48 cm

$$\frac{1 \text{ in}}{2.54 \text{ cm}} = \frac{12 \text{ in}}{x}$$