

Unit 3 Test Study Guide

1. There are 15 hats on a rack and 9 of them are orange. What percentage of the hats are NOT orange?

$$15 - 9 = 6$$



40%

$$6 \div 15 = 0.4$$

$$0.4 \cdot 100 = 40$$

2. Select all of the trips that would take two hours.
 a. Drive 60 miles per hour between Raleigh and Wilmington, which are 120 miles apart

$$120 \div 60 = 2$$

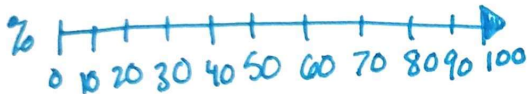
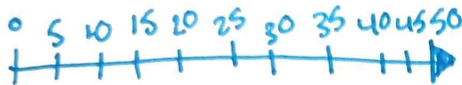
- b. Walk 3 miles per hour to school, which is $\frac{1}{2}$ mile away

$$\frac{1}{2} \div 3 = \frac{1}{6}$$

- c. Take a train going 70 miles per hour from Hershey to Philadelphia, which are 140 miles apart

$$140 \div 70 = 2$$

3. Jada's family has completed 30% of a trip. They have traveled 15 miles. How far is the trip?



50 miles

4. Mai runs 3 laps around the track in 4 minutes.
 a. How many minutes per lap is that?

$$4 \div 3 = 1\frac{1}{3} \text{ minutes per lap (} 1\frac{1}{3} \text{)}$$

- b. How many laps per minute is that?

$$3 \div 4 = \frac{3}{4} \text{ laps per minute (0.75)}$$

- c. If Mai runs 21 laps at the same rate, how long does it take her?

$$1\frac{1}{3} \cdot 21 = 28 \text{ minutes}$$

5. A sailboat captain is mapping a trip and wants to know the distance the sailboat will travel over certain time intervals. Assuming that the sailboat travels at a constant speed, what is its speed?

Time (hours)	Distance (miles)
0.5	7.5
1	?
1.5	22.5

15 mph

6. Which weighs more:

- a. Pumpkin that weighs 6.5 kilograms
 b. Baby that weighs 10 pounds

*Note: 1 pound is about 0.45 kilograms

$$10 \cdot 0.45 = 4.5 \text{ kg}$$

7. Andre and Lin are 12 miles apart on a path when they start moving towards each other. Andre runs at a constant speed of 5 miles per hour, and Lin walks at a constant speed of 3 miles per hour. How long does it take them to meet?

$$5 + 3 = 8$$

$$12 \div 8 = 1.5 \text{ hours}$$

8. A Lamborghini traveled 220 miles in 4 hours. How many miles does the Lamborghini drive per hour (speed)?

$$220 \div 4 = 55 \text{ mph}$$

9. The table below shows how much money Addison earns shoveling snow for a different number of driveways.

Driveways Shoveled	Amount Earned (\$)
3	33

10. Kiran paid \$54.00 for 3 tickets to go to a corn maze. At the same rate, what is the cost of 2 tickets to the maze?

5	55
7	77
9	99

At this rate, how much would Addison earn if she shoveled 11 driveways?

$33 \div 3 = 11$
 $11 \cdot 11 = 121$ \$121

$54 \div 3 = \$18$ per ticket
 $18 \cdot 2 = 36$ \$36

11. The table below shows the number of bottled waters in a case and the cost of the case.

Number of bottles (per case)	Cost of case
6	\$0.95
12	\$1.88
20	\$2.99
24	\$5.99

Which choice is the best buy? 20 bottles for \$2.99

12. The table shows the cost of buying a certain number of items.

Item	Quantity	Total Cost
bagel	10	\$10.50
donut	4	\$3.80
muffin	6	\$13.14
scone	8	\$20.72

Which item has the **highest** price per unit? Scone

13. Diego is making a punch that requires 8 cups of orange juice, but the store only sells orange juice in pints. How many pints of orange juice will he need to buy? (1 pint = 2 cups)

$8 \div 2 = 4$ pints

14. Use the table to answer the following question.

Cupcake Topping	Total
Chocolate chips	30
Marshmallows	15
M&Ms	10
Chocolate sprinkles	20
Rainbow sprinkles	25

What percent of the cupcake toppings are chocolate sprinkles?

20%

15. A school has 100 students. On Friday, 70 students went on a field trip. What percent of the students did **NOT** go on the field trip?

$100 - 70 = 30$

30%

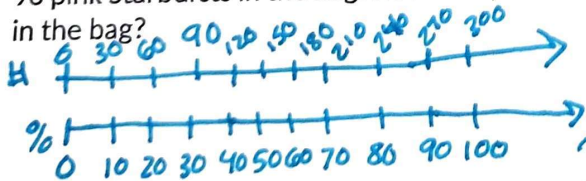
16. Madelyn has completed 10/20 problems. Will has completed 80% of the problems. Adam has finished $\frac{3}{4}$ of them. Who has finished the most?

$10 \div 20 = 0.5 \rightarrow 50\%$

$\frac{3}{4} = 75\%$

Will

17. In a bag Starbursts, 30% of the bag are pink. There are 90 pink Starbursts in the bag. How many Starbursts are in the bag?



300 Starbursts

18. Ms. Goswami is 64 inches tall. About how many feet tall is Ms. Goswami? (1 foot = 12 inches)

$64 \div 12 = 5 \frac{1}{3}$ ft

5 ft 4 in