Student Name: _____

Number of Questions: **25**

Class Name: **Math Essentials Spring 2026 MATH0044-3 In-Person**

Instructor Name: **Foster, Glen**

Question 1 of 25

Write 42% as a fraction in simplest form.

Question 2 of 25

Write $\dfrac{1}{5}$ as a percentage.

Question 3 of 25

Write 7% as a decimal.

Question 4 of 25

Solve the following proportion for y.

$$\frac{3}{8} = \frac{y}{5}$$

Round your answer to the nearest tenth.

$y =$ _____

Question 5 of 25

Answer each part. If necessary, round your answers to the nearest hundredth.

(a) At Cheng's Bike Rentals, it costs $16 to rent a bike for 3 hours.
    How many dollars does it cost per hour of bike use?
(b) Rachel bought 24 pounds of rice for $12.
    How many dollars did she pay per pound of rice?

(a) At Cheng's Bike Rentals, it costs $16 to rent a bike for 3 hours.
    How many dollars does it cost per hour of bike use?

    _____ dollars per hour

(b) Rachel bought 24 pounds of rice for $12.
    How many dollars did she pay per pound of rice?

    _____ dollars per pound

Question 6 of 25

On the blueprint of a house, 33 millimeters represents 8 meters. The actual length of the living room is 6 meters. What is its length on the blueprint?

_____ millimeters

Question 7 of 25

An item has a listed price of $80. If the sales tax rate is 3%, how much is the sales tax (in dollars)?

Question 8 of 25

Answer the following questions.

(a) 186% of what is 56.73?   _____

(b) What number is 26.8% of 67.5?   _____

Question 9 of 25

David has ridden 24 miles of a bike course. The course is 25 miles long. What percentage of the course has David ridden so far?

Question 10 of 25

In a recent year, 21.3% of all registered doctors were female. If there were $58,900$ female registered doctors that year, what was the total number of registered doctors?

Round your answer to the nearest whole number.

Question 11 of 25

An item is regularly priced at $\$85$. Ryan bought it at a discount of 65% off the regular price.

Use a calculator to find how much Ryan paid.

Question 12 of 25

Solve for z.

$$x + 12 + z = A$$

Question 13 of 25

Solve for x.

$$z = 5x - y$$

Question 14 of 25

Solve for y.

$$M = \frac{x + y}{9}$$

Question 15 of 25

Solve for d.

$$x = \frac{C}{d}$$

Question 16 of 25

Solve for w.

$$R = \frac{s}{3 + w}$$

Question 17 of 25

For a ride on a rental scooter, Henry paid a $\$2$ fee to start the scooter plus $\$0.12$ per minute of the ride. The total bill for Henry's ride was $\$18.08$. For how many minutes did Henry ride the scooter?

☐ minutes

Question 18 of 25

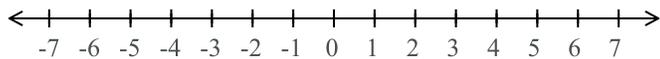Write an inequality for the following statement.

   y is less than 8

Question 19 of 25

Rewrite the set B by listing its elements. Make sure to use the appropriate set notation.

$$B = \{z \mid z \text{ is an integer and } -5 \leq z \leq -3\}$$

Question 20 of 25

Graph the set $\{x \mid x < 2\}$ on the number line.
Then, write the set using interval notation.

Question 21 of 25

Solve the inequality for x.

$$-8 - 3x > 10$$

Simplify your answer as much as possible.

Question 22 of 25

Solve the inequality for x.

$$9x - 26 \geq -4(2 - 3x)$$

Simplify your answer as much as possible.

Question 23 of 25
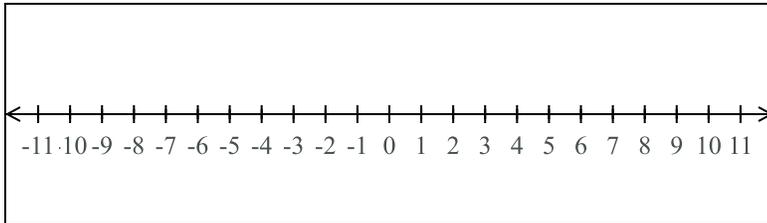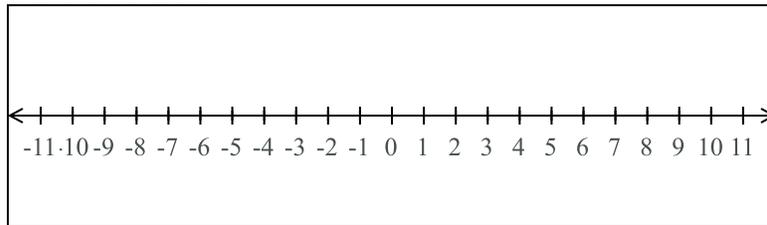
Solve the inequality for v.

$$6 - \frac{6v}{5} < -2$$

Simplify your answer as much as possible.

Solve the compound inequality.

$$2x + 3 \leq 9 \text{ or } 4x + 3 > 27$$

Graph the solution on the number line.

Charmaine is going to rent a truck for one day. There are two companies she can choose from, and they have the following prices.

Company A charges $\$125$ and allows unlimited mileage.

Company B has an initial fee of $\$65$ and charges an additional $\$0.80$ for every mile driven.

For what mileages will Company A charge less than Company B?

Use m for the number of miles driven, and solve your inequality for m.