

Question 1

A

Write the equation that describes the line with slope =  $\frac{1}{2}$  and  $y$ -intercept = 3 in slope-intercept form.

2. Write the equation that describes the line in slope-intercept form.  
slope =  $-2$ , point  $(-4, 3)$  is on the line

B

Write the equation  $4x + 8y = 32$  in slope-intercept form. Then graph the line described by the equation.

4. The equations of four lines are given. Identify which lines are parallel.

Line 1:  $y = \frac{1}{2}x + 3$

Line 2:  $x + \frac{1}{8}y = -6$

Line 3:  $y = -8x + 4$

Line 4:  $y - 3 = 2(x - 8)$

C

D

## Question 2

A

The equations of four lines are given. Identify which lines are parallel.

Line 1:  $y = 2x - 7$

Line 2:  $y + 4 = \frac{1}{2}(x - 7)$

Line 3:  $y = 7x + 3$

Line 4:  $x - \frac{1}{7}y = 5$

Write the equation that describes the line in slope-intercept form.

slope = 3, point  $(-2, -4)$  is on the line

C

B

1. Write the equation that describes the line with slope =  $-\frac{1}{3}$  and  $y$ -intercept =  $-2$  in slope-intercept form.

3. Write the equation  $4x - 5y = 10$  in slope-intercept form. Then graph the line described by the equation.

D

### Question 3

A

3. Write the equation  $2x - 5y = -15$  in slope-intercept form. Then graph the line described by the equation.

1. Write the equation that describes the line with slope  $= -4$  and  $y$ -intercept  $= -\frac{7}{2}$  in slope-intercept form.

C

B

4. The equations of four lines are given. Identify which lines are parallel.
- Line 1:  $y = 7x - 9$
- Line 2:  $x - \frac{1}{7}y = 8$
- Line 3:  $y = -4x + 5$
- Line 4:  $y - 9 = -\frac{1}{4}(x + 4)$

2. Write the equation that describes the line in slope-intercept form.  
slope  $= 2$ , point  $(-1, 2)$  is on the line

D

## Question 4

- A
2. Write the equation that describes the line in slope-intercept form.  
slope =  $-2$ , point  $(-4, 3)$  is on the line

B

Write the equation  $-3x - 4y = -12$  in slope-intercept form. Then graph the line described by the equation.

4. The equations of four lines are given. Identify which lines are parallel.
- Line 1:  $y = 8x + 9$   
Line 2:  $y - 6 = \frac{1}{4}(x - 5)$   
Line 3:  $y = 4x + 7$   
Line 4:  $x - \frac{1}{8}y = -8$

1. Write the equation that describes the line with slope =  $-1$  and  $y$ -intercept =  $2$  in slope-intercept form.

C

D

### Question 5

A

You are visiting Baltimore, MD and a taxi company charges a flat fee of \$3.00 for using the taxi and \$0.75 per mile. Write an equation. If a taxi ride cost \$15, how many miles did the taxi travel?

The math department sponsors a Math Family Fun Night each year. In the first year, there were 35 participants. In the third year, there were 57 participants. Write an equation. How many participants are predicted for the 5th year?

C

B

While on vacation in Washington DC, the cab ride for the Dulles airport to the hotel is 15 miles. The total cost of the cab ride was \$25.50. The cabbie charges \$1.50 per mile for a cab ride. Write an equation.

What is the flat rate of the cab ride?

You are buying \$48 worth of lawn seed that consists of two types of seed. One is rye grass that costs \$4 per pound and the other type is a dune grass that costs \$6 per pound. Write an equation. If you buy 3 pounds of the \$4 seed, how many pounds of the \$6 seed can you buy?

D

Question 6

A

You are buying \$30 of birdseed that consists of two types of seed. Thistle seed for finches costs \$2 per pound. Sunflower seed for sunbirds costs \$1.50 per pound. Write an equation. How many pounds of thistle seed can you buy if you buy 8 pounds of sunflower seed?

B

A plumber charges \$50 to make a house call. He also charges \$25.00 per hour for labor. Write an equation. If the bill from the plumber is \$162.50, how many hours did the plumber work?

An internet service provider charges \$18 per month plus an initial set-up fee. One customer paid a total of \$81 after 2 months of service. Write an equation. What is the initial set-up fee?

C

All tickets for a concert are the same price. The ticket agency adds a fixed fee to every order. A person who orders 5 tickets pays \$93. A person who orders 3 tickets pays \$57. Write an equation. How much do 4 tickets cost?

D

### Question 7

A

The cost of a classified ad is based on a daily rate plus a flat service fee. One day costs \$3.50 and 4 days costs \$8.00. Write the equation. What's the cost for 11 days?

Lynn is tracking the progress of her plant's growth. It starts at 5 cm high. It grows 1.5 cm per day. Write an equation. When will the plant be 17 cm tall?

C

B

A dog kennel charges \$20 per night to board your dog. You can also have a doggie treat delivered to your dog for \$5. You budgeted \$100 for your dog's stay. Write an equation. How many dog treats can you give your dog if he's there for 3 nights?

Your gym membership costs \$33 per month after an initial membership fee. You paid a total of \$228 after 6 months. Write an equation. What was the initial membership fee?

D

### Question 8

A

A cable company offers their premium service for \$40/month plus a one-time set up fee. The total cost for setup and 6 months is \$275. Write an equation. What is the one-time set-up fee?

A math test has 100 points. Some questions are 2 points and some are 4 points. Write an equation. If there are 24 questions worth 4 points, how many questions will be worth 2 points?

C

B

After the football game you head home. You are 11 km from home when you have been driving for 10 minutes and 8 km from home when you have been driving for 15 minutes. Write an equation. How far from home are you after 6 minutes?

Molly has a birthday party at the local roller rink. The roller rink charges a flat fee of \$6 plus \$3.25 per hour. Write an equation. How many hours can her party be if her budget for the rink rental is \$24?

D