

8.2B: Approximate the value of an irrational number, including  $\pi$  and square roots of numbers less than 225, and locate that rational number approximation on a number line (Supporting Standard)

(8.1F)

1. A square has an area of 157 square centimeters. The length of the square's sides would be between which two consecutive numbers?

Select **TWO** correct answers.

- 11 cm  
 12 cm  
 13 cm  
 14 cm  
 15 cm

(8.1F)

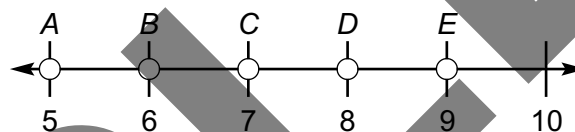
2. Which of the following is the best approximation for  $\sqrt{200}$ ?

- A 10.0  
 B 14.1  
 C 14.9  
 D 15.0

(8.1D; 8.1F)

3. Between which two consecutive points on the number line is  $\sqrt{42}$ ?

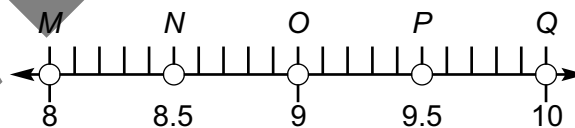
Shade the **TWO** correct circles that represent the points.



(8.1D; 8.1F)

4. Between which two consecutive points on the number line is  $\sqrt{86}$ ?

Shade the **TWO** correct circles that represent the points.

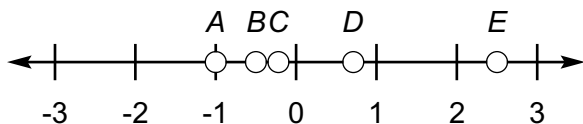


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8.2D: Order a set of real numbers arising from mathematical and real-world contexts (Readiness Standard)

(8.1D; 8.1F)

1. Look at the number line below.



Which point represents a number less than 0 but greater than  $-\frac{1}{2}$ ?

Shade the **ONE** correct circle that represents the point.

(8.1F)

2. Annie went shopping with several coupons: 25% off athletic shoes,  $\frac{1}{10}$  off jewelry, 40% off sale merchandise, and  $\frac{1}{3}$  off books or CDs.

Complete the list to show the discounts in order from least to greatest.

Select the correct answer for each line.

25%       $\frac{1}{3}$       40%       $\frac{1}{10}$

\_\_\_\_\_

(8.1D; 8.1F)

3. The school band holds fundraisers during the year to raise money. The table below shows different fundraisers and the portion of the yearly total earned by each.

**Band Fundraising Profits**

| Fundraiser    | Portion of Yearly Total |
|---------------|-------------------------|
| Car wash      | 25%                     |
| Candy sale    | $\frac{1}{5}$           |
| Bake sale     | $\frac{3}{20}$          |
| Gift wrapping | 30%                     |

Circle the correct option for each blank that completes the sentence below.

The     (a)     fundraiser earned the school the least amount of money, and the     (b)     fundraiser earned the school the most amount of money.

(a) candy sale    or    (a) bake sale

(b) bake sale    or    (b) gift wrapping

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8.4B: Graph proportional relationships, interpreting the unit rate as the slope of the line that models the relationship  
(Readiness Standard)

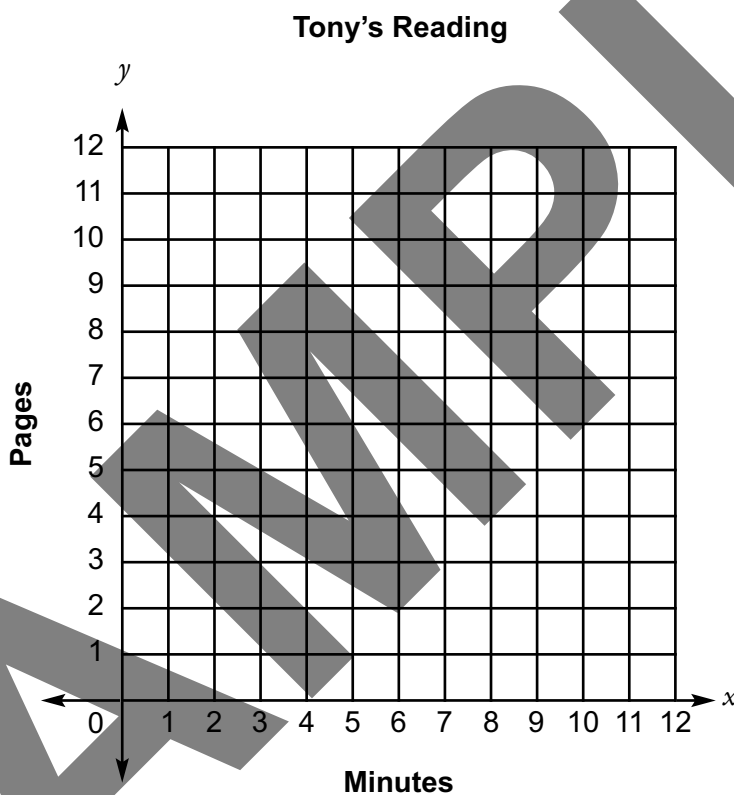
(8.1A; 8.1D; 8.1E; 8.1F)

1. Tony reads at a rate of 40 pages every 10 minutes.

The proportional relationship can be represented by an equation that can be graphed on a coordinate grid.

Plot four points that satisfy the equation.

Plot each point on the coordinate grid.



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8.5A: Represent linear proportional situations with tables, graphs, and equations in the form of  $y = kx$  (Supporting Standard)

(8.1A; 8.1E; 8.1F)

1. At a carnival booth, Cindy spent 6 minutes on each face she painted. Which equation best represents the linear relationship between  $x$ , the number of faces Cindy painted, and  $y$ , the total amount of time she spent painting the faces?

- A  $6x = y$                       C  $6xy = k$   
 B  $x = 6y$                       D  $y = (-\frac{1}{6})x$

(8.1A; 8.1E; 8.1F)

2. The table below shows the total cost for different numbers of cupcakes at a bakery.

| Cupcakes ( $x$ ) | Total Cost ( $y$ ) |
|------------------|--------------------|
| 3                | \$2.55             |
| 6                | \$5.10             |
| 12               | \$10.20            |
| 18               | \$15.30            |

Write an equation that represents the linear relationship between  $x$ , the number of cupcakes sold, and  $y$ , the total cost of the cupcakes.

Record your answer in the space provided.

(8.1A; 8.1E; 8.1F)

3. The weight of an object on Earth is proportional to the weight of the same object on the Moon. For example, a 100-pound object on Earth would weigh about 16 pounds on the Moon.

Write an equation that represents the linear relationship between  $x$ , the weight of an object on Earth, and  $y$ , the weight of the same object on the Moon.

Record your answer in the space provided.

(8.1A; 8.1E; 8.1F)

4. A car can travel 310 miles on 8 gallons of gas.

Write an equation that represents the linear relationship between  $x$ , the number of gallons of gas, and  $y$ , the total distance the car can travel.

Record your answer in the space provided.

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8.5B: Represent linear non-proportional situations with tables, graphs, and equations in the form of  $y = mx + b$ , where  $b \neq 0$  (Supporting Standard)

(8.1D; 8.1E; 8.1F)

1. Which table identifies points on the line produced by the equation  $y = 6x - 4$ ?

A

|          |   |    |    |    |
|----------|---|----|----|----|
| <b>x</b> | 2 | 4  | 6  | 8  |
| <b>y</b> | 2 | 10 | 18 | 26 |

B

|          |   |    |    |    |
|----------|---|----|----|----|
| <b>x</b> | 2 | 4  | 6  | 8  |
| <b>y</b> | 8 | 20 | 32 | 44 |

C

|          |   |    |    |    |
|----------|---|----|----|----|
| <b>x</b> | 3 | 5  | 7  | 9  |
| <b>y</b> | 6 | 14 | 22 | 30 |

D

|          |    |    |    |    |
|----------|----|----|----|----|
| <b>x</b> | 3  | 5  | 7  | 9  |
| <b>y</b> | 12 | 23 | 31 | 44 |

(8.1D; 8.1E; 8.1F)

2. An equation of a line is shown below.

$$y = 2.2x + 3.4$$

Indicate whether each ordered pair in the table represents a point on the line or not.

Select **ONE** correct answer in each row.

| <b>(x, y)</b> | <b>Points On the Line</b> | <b>Points Not On the Line</b> |
|---------------|---------------------------|-------------------------------|
| (2, 12.6)     | <input type="checkbox"/>  | <input type="checkbox"/>      |
| (3, 10)       | <input type="checkbox"/>  | <input type="checkbox"/>      |
| (1, 5.8)      | <input type="checkbox"/>  | <input type="checkbox"/>      |
| (0, 2.2)      | <input type="checkbox"/>  | <input type="checkbox"/>      |