

**Math Packet**  
**Summer 2018**  
**Incoming 7<sup>th</sup> Grade**

Student: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Instructor: Pearson School  
Course: digits - grade 6  
Book: digits - grade 6

Assignment: Topic 13 Review  
Homework

1. Find the area of the rectangle.



The area is

2. The school is planning a new playground. The playground will be in the shape of a square that measures 14 m on a side. What will be the area of the new playground?

The area will be

3. A rectangular playing field is 90 yards long. Its area is 3,960 square yards. Find the width of the field. (Hint: In a rectangle, length and width are the same as base and height.)

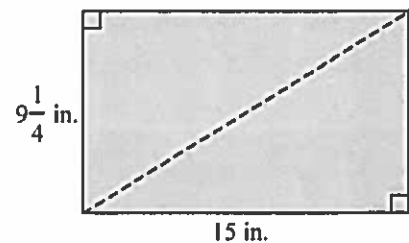
The width of the field is

4. **Reasoning** You want to increase the size of a small square image to make a poster. What happens to the area of the image if you multiply the length of each side by 5?

Choose the correct answer below.

- A. The area of the new image is 20 times the area of the original.  
 B. The area of the new image is 25 times the area of the original.  
 C. The area of the new image is 5 times the area of the original.  
 D. The area of the new image is 10 times the area of the original.  
 E. The change in the area cannot be found without the original side length.

5. A rectangle has dimensions  $9\frac{1}{4}$  in. by 15 in. A diagonal of the rectangle forms two matching right triangles. What is the area of one of the triangles?



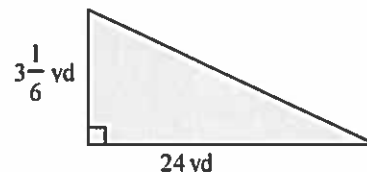
The area of one of the triangles is  in.<sup>2</sup>.

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6. Isabella is building a playground in the shape of a right triangle. She wants to know the area of the playground to help her decide how much sand to buy. Compose the playground and a matching triangle into a rectangle. What are the dimensions of the rectangle? Find the area of the playground.

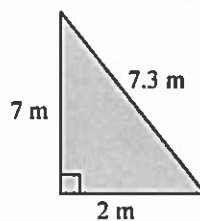


What are the dimensions of the rectangle?

- A.  $3\frac{1}{6}$  yd by  $3\frac{1}{6}$  yd  
 B.  $27\frac{1}{6}$  yd by  $54\frac{1}{3}$  yd  
 C.  $3\frac{1}{6}$  yd by 24 yd  
 D. 24 yd by 24 yd

The area of the playground is   $\text{yd}^2$ .

7. Find the area of the right triangle.



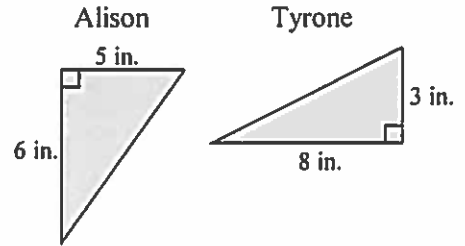
The area of the right triangle is   $\text{m}^2$ .  
(Round to the nearest tenth as needed.)

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8. Alison and Tyrone each bought a slice of pizza in the shape of a right triangle as shown. What is the area of each slice of pizza? Who has the larger slice?



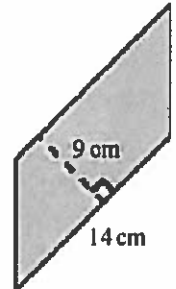
Alison's slice of pizza has an area of  in.<sup>2</sup>.

Tyrone's slice of pizza has an area of  in.<sup>2</sup>.

Who has the larger slice of pizza?

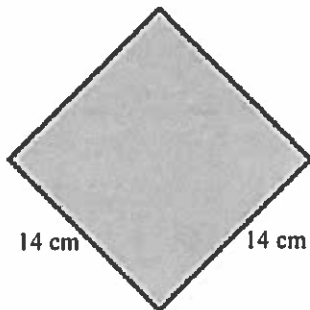
- Tyrone
- Alison
- Both slices are the same size.

9. Decompose the parallelogram into a rectangle. Use the rectangle to find the area of the parallelogram.

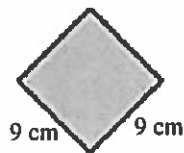


Decompose the parallelogram into a rectangle. Choose the correct rectangle below.

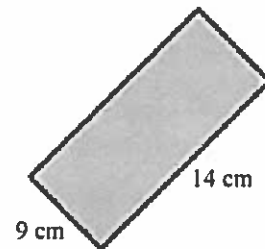
A.



B.



C.



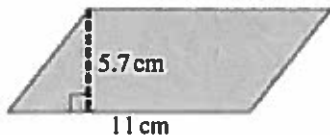
The area of the parallelogram is  cm<sup>2</sup>.

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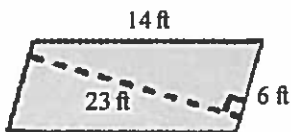
Assignment: Topic 13 Review  
Homework

10. Find the area of the parallelogram.



The area is   $\text{cm}^2$ .

11. **Error Analysis** A teacher asked a student to find the area of this parallelogram. The student said the area is  $322 \text{ ft}^2$ . What is the correct area? What error did the student make?



The correct area is   $\text{ft}^2$ .

What error did the student make?

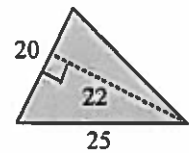
- A. The student multiplied two side lengths.
- B. The student multiplied the height and the wrong base.
- C. The student added the base and the height.
- D. The student added the two side lengths.

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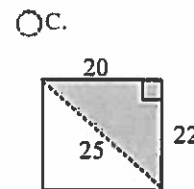
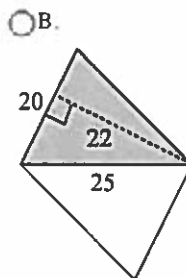
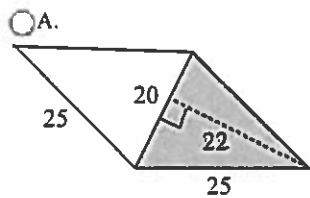
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Assignment: Topic 13 Review  
 Homework

12. For a geometry project, the students are cutting triangles like the one shown. All measurements are in inches. Compose the triangle into a parallelogram. Then find the area of the triangle.

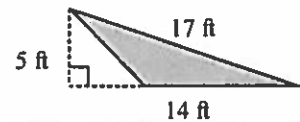


Which figure below shows the triangle composed into a parallelogram?

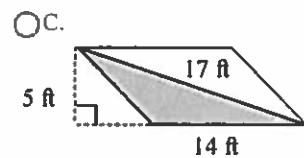
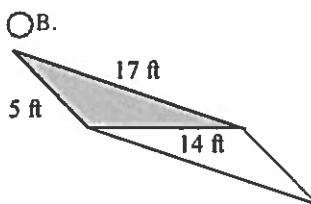
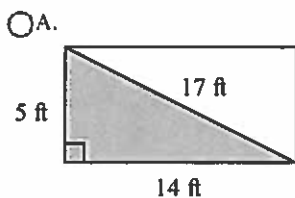


The area of the triangle is  square inches.

13. Find the area of the triangle by composing it into a parallelogram. What is the area of the triangle?

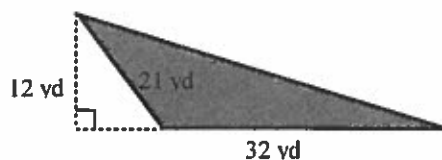


Which figure below shows the triangle composed into a parallelogram?



The area of the triangle is  ft<sup>2</sup>.

14. Find the area of the triangle.



The area of the triangle is  yd<sup>2</sup>.

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Assignment: Topic 16 Review  
Homework

1. Find the median value.

54, 37, 29, 58, 45, 22, 48

What is the median value?

(Type an integer or a decimal.)

2. Make a box plot of the data set.

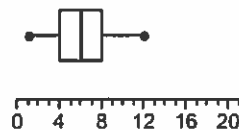
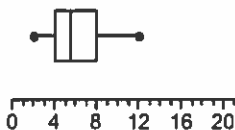
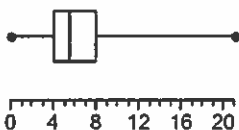
12, 5, 6, 2, 4, 8

Which is the box plot of the data set?

A.

B.

C.



3. Find the median of this set of numbers. Is the median an appropriate measure of center for this data set?

19, 17, 20, 13, 12, 33, 15

The median is .

Is the median an appropriate measure of center for this data set?

- A. Yes, the median is an appropriate measure of center because it is close to all of the values except 33, which may be an error in data collection.
- B. No, the median is not an appropriate measure of center because it is close to all of the values except 33, which may be an error in data collection.
- C. No, the median is not an appropriate measure of center because it is not close to the center of the data distribution.
- D. Yes, the median is an appropriate measure of center because it is not close to the center of the data distribution.

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Assignment: Topic 16 Review  
Homework

4. Make a box plot of the data set.

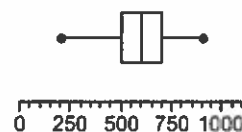
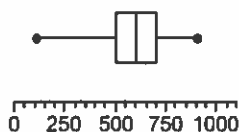
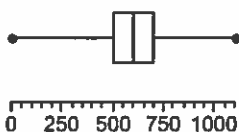
700, 600, 200, 500, 600, 900

Which is the box plot of the data set?

A.

B.

C.



5. Find the mean of the following set of numbers.

6, 0, 10, 8

The mean is .

6. Three cars are driving on a racetrack. The mean speed of the three cars is 100 miles per hour. Car X drives 106 miles per hour and Car Y drives 118 miles per hour. Use the mean to estimate the speed of Car Z. Then find the actual speed of Car Z.

Estimate the speed of Car Z. Choose the correct answer below.

- A. The speed of Car Z is less than 100 miles per hour.
- B. The speed of Car Z is about 100 miles per hour.
- C. The speed of Car Z is greater than 100 miles per hour.
- D. It is impossible to estimate the speed of Car Z.

Car Z drives  miles per hour.



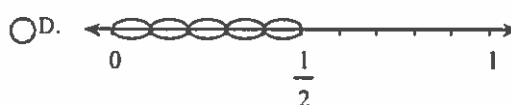
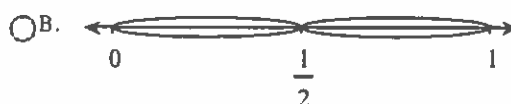
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Assignment: Topic 6 Review Homework

1. Make a model that shows  $\frac{1}{5} \div 2$ .

Which of these models shows  $\frac{1}{5} \div 2$ ?



2. Make a model that shows  $4 \div \frac{1}{2}$ .

Which of these models shows  $4 \div \frac{1}{2}$ ?



3. A construction worker has a rope that is 10 m long. She needs to cut it into pieces that are each  $\frac{2}{9}$  m long. How many such pieces can she cut without having any rope leftover?

She can cut  pieces that are  $\frac{2}{9}$  m long from the 10-m rope.

(Type a whole number, proper fraction, or mixed number.)

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Assignment: Topic 6 Review Homework

4. A scientist fills 3 jars with a total of  $\frac{4}{5}$  kg of a chemical. He puts the same amount in each jar. How much of the chemical does each jar have? Use pencil and paper. Show two different ways you can find the answer.

Each jar has  kg of the chemical.  
(Type a whole number, proper fraction, or mixed number.)

5. A shopkeeper cuts a wheel of cheese into 20 equal wedges. A customer buys one-fourth of the wheel. How many wedges does the customer buy? Find  $\frac{1}{4} \div \frac{1}{20}$ . Use the number line to help find the solution.



The customer buys  wedges.  
(Simplify your answer.)

6. Find  $\frac{1}{2} \div \frac{1}{8}$ .

$\frac{1}{2} \div \frac{1}{8} =$   (Simplify your answer.)

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Assignment: Topic 6 Review Homework

7. Which of the following has  $\frac{1}{2} \div \frac{1}{14}$  as the solution? Find  $\frac{1}{2} \div \frac{1}{14}$ . Assume the shapes are rectangular.

Find the width of a  $\frac{1}{14}$ -square-kilometer park that is  $\frac{1}{2}$  kilometer long.

Find the area of a parking lot that is  $\frac{1}{2}$  mile wide and  $\frac{1}{14}$  mile long.

Find the length of a  $\frac{1}{2}$ -square-kilometer park that is  $\frac{1}{14}$  kilometer wide.

Choose the correct answer below.

- A. Find the length of a  $\frac{1}{2}$ -square-kilometer park that is  $\frac{1}{14}$  kilometer wide.
- B. Find the area of a parking lot that is  $\frac{1}{2}$  mile wide and  $\frac{1}{14}$  mile long.
- C. Find the width of a  $\frac{1}{14}$ -square-kilometer park that is  $\frac{1}{2}$  kilometer long.

$$\frac{1}{2} \div \frac{1}{14} = \square \text{ (Simplify your answer.)}$$

8. **Error Analysis** Your friend incorrectly claims that  $\frac{1}{5} \div \frac{1}{10} = \frac{1}{2}$ . Find  $\frac{1}{5} \div \frac{1}{10}$ . Then describe what may have been your friend's error.

$$\frac{1}{5} \div \frac{1}{10} = \square \text{ (Simplify your answer.)}$$

Your friend multiplied the  the divisor, rather than multiplying the dividend by the reciprocal of the divisor.

9. Use the number line to find  $\frac{3}{5} \div \frac{3}{20}$ .



$$\frac{3}{5} \div \frac{3}{20} = \square$$

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Assignment: Topic 7 Review Homework

1. You are shopping and spend \$3.34 in one store and \$7.86 in another. How much did you spend in all?

You spent \$  in all.

(Type a whole number or a decimal.)

2. **Error Analysis** A carpenter needs 37.3 meters of wood to complete a certain project. She has 28.65 meters on the jobsite. She calculates that she needs another 86.5 meters of wood, but realizes this is incorrect. Find the amount of wood that the carpenter needs to complete the project. Then describe a mistake the carpenter might have made.

The carpenter needs  meters of wood.

(Type a whole number or a decimal.)

What mistake might the carpenter have made?

- A. The carpenter subtracted incorrectly in the tenths place.  
 B. The carpenter subtracted incorrectly in the hundredths place.  
 C. The carpenter placed the decimal point in the difference incorrectly.  
 D. The carpenter did not align the decimal points correctly before subtracting.

3. Find  $4.3 - 1.46$ .

$$4.3 - 1.46 = \square$$

(Type a whole number or a decimal.)

4. Find  $4.3 + 3.87$ .

$$4.3 + 3.87 = \square$$

(Type a whole number or a decimal.)

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Assignment: Topic 7 Review Homework

5. **Error Analysis** Sasha claims the product  $0.08 \times 0.69$  is 0.00552. Find the product. What mistake might Sasha have made?

$0.08 \times 0.69 = \square$  (Type a whole number or a decimal.)

What mistake might Sasha have made?

- A. Sasha used too many decimal places in the product.  
 B. Sasha used too few decimal places in the product.  
 C. Sasha added instead of multiplied.  
 D. Sasha divided instead of multiplied.
6. **Stamp Dimensions** A rectangular stamp has length 3.45 cm and width 2.2 cm. What is the area of the stamp?

The area is  $\square$   $\text{cm}^2$ .  
(Type a whole number or a decimal.)

7. **Reasoning** A square plot of land is 105.6 yards on each side. Find the area of the plot of land. Use pencil and paper. What is the relationship between the number of decimal places in the side length and the number of decimal places in the area?

The area is  $\square$  square yards.  
(Type a whole number or a decimal.)

8. Arpi has a glass that holds 9.75 fluid ounces. She drinks 1.5 glasses of water in one day. To the nearest hundredth of a fluid ounce, how much water does Arpi drink?

She drinks about  $\square$  ounces of water.  
(Do not round until the final answer. Then round to the nearest hundredth as needed.)

9. Use long division to find the quotient.

$8,022 \div 19$

$8,022 \div 19 = \square$  R  $\square$

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Assignment: Topic 7 Review Homework

10. Divide.

$$14,153 \div 20$$

$$14,153 \div 20 = \square \text{ R } \square$$

11. **Reasoning** A truck at a granite quarry has a maximum weight capacity of 12,610 pounds. If each granite block weighs 316 pounds, how many blocks can the truck carry? Use pencil paper. Describe what the remainder represents in this problem.

How many blocks can the truck carry?

- A. 39  
 B. 39 R 286  
 C. 40  
 D. 38 R 286

12. A library has 14,100 books that have spines of about the same width. If 20 books can fit on one bookshelf, how many bookshelves would it take to hold the library's books?

Choose the correct answer below.

- A. 75  
 B. 704  
 C. 705  
 D. 74

13. Find  $2.9 \div 5$ .

$$2.9 \div 5 = \square \text{ (Type a whole number or a decimal.)}$$

14. Divide.

$$48.6 \div 1.5$$

$$48.6 \div 1.5 = \square \text{ (Type a whole number or a decimal.)}$$

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Assignment: Topic 7 Review Homework

19. **Reasoning** Write 0.86 as a fraction. Use pencil and paper. Could you use the same method to write 3.86 as a mixed number? As an improper fraction? Explain.

0.86 =  (Simplify your answer.)

20. A supply closet contains  $\frac{1}{3}$  of a school's crayons. Write  $\frac{1}{3}$  as a decimal rounded to the nearest hundredth.

$\frac{1}{3} \approx$

21. Compare 0.13 and  $\frac{1}{9}$  by changing the fraction to a decimal.

0.13   $\frac{1}{9}$

22. Compare 0.6 and  $\frac{3}{5}$  by changing the decimal to a fraction.

0.6   $\frac{3}{5}$

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Assignment: Topic 7 Review Homework

23. **Error Analysis** Suzie claims that the greatest of the numbers below is  $\frac{3}{7}$  and the least is  $\frac{2}{9}$ . Order the numbers from least to greatest. What was Suzie's likely error?

$$0.28 \quad 0.21 \quad \frac{3}{7} \quad \frac{2}{9}$$

Order the numbers from least to greatest.

What was Suzie's likely error?

- A. She switched the order of the two fractions.
- B. She stopped dividing after only one place when finding the decimal equivalent of  $\frac{3}{7}$ .
- C. She divided the denominator of  $\frac{2}{9}$  by its numerator to find the decimal equivalent.
- D. She stopped dividing after only one place when finding the decimal equivalent of  $\frac{2}{9}$ .

24. **Reasoning** Compare the decimals 2.525 and 2.521. Use pencil and paper. Explain how you can use a number line to compare the two values.

$$2.525 \quad \square \quad 2.521$$

25. Two friends start an exercise program. The two friends spend a combined 45.7 hours at the gym each month. The first friend spends 22.6 hours at the gym. Estimate the number of hours the second friend spends at the gym by rounding each value to the nearest whole number. Then find the exact number of hours.

Estimate the number of hours the second friend spends at the gym.

hours

Find the exact number of hours the second friend spends at the gym.

hours



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Math)

Assignment: Topic 3 Review Homework

1. Is  $68 - 8 = 76$  true, false, or an open sentence?

Choose the correct answer below.

- Open  
 True  
 False

2. Which expression is equivalent to  $13y - 7y$ ?

$5y + 8y$        $4y + 2y$

Choose the correct answer below.

- A. The expression  $5y + 8y$  is equivalent to  $13y - 7y$ .  
 B. The expression  $4y + 2y$  is equivalent to  $13y - 7y$ .  
 C. Both expressions are equivalent to  $13y - 7y$ .  
 D. Neither expression is equivalent to  $13y - 7y$ .

3. Which equations have 6 as a solution?

$9 - v = 3$        $v + 9 = 15$        $7v = 43$        $36 \div v = 6$

Select all the equations that have 6 as a solution.

- A.  $9 - v = 3$   
 B.  $v + 9 = 15$   
 C.  $7v = 43$   
 D.  $36 \div v = 6$

4. Which number is a solution to  $x + 9 = 1 + 3x$ ?

8, 4, 5, 7, or 6

The solution is .

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Assignment: Topic 3 Review Homework

17. Which of these situations have exactly one solution? More than one solution?

1. To make some cookies, Karen needs 4 eggs.
2. Steve went to more than 8 baseball games last year.
3. Last year, a teacher gave one test for each of the 9 chapters in the textbook.
4. Some friends spent more than 2 hours playing their favorite board game.

Select all of the situations that have exactly one solution.

- A. Situation 1
- B. Situation 3
- C. Situation 2
- D. Situation 4

Select all of the situations that have more than one solution.

- A. Situation 2
- B. Situation 4
- C. Situation 1
- D. Situation 3

18. Define a variable and write an inequality to model the given situation.

A light bulb can be at most 50 watts to be safely used in this light fixture.

If  $w$  is the light bulb's wattage, which of the following inequalities models the given situation?

- A.  $w > 50$
- B.  $w \geq 50$
- C.  $w < 50$
- D.  $w \leq 50$

Student: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

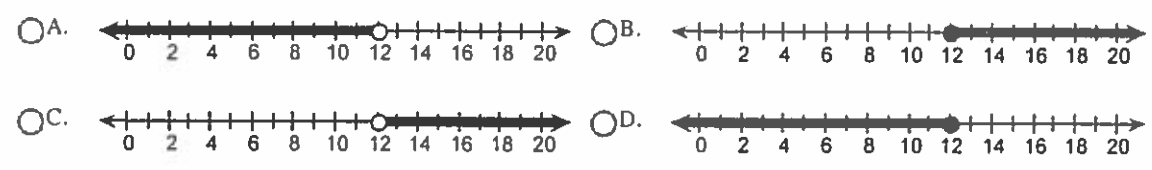
Instructor: Pearson School  
Course: digits - grade 6  
Book: digits, grade 6 (Middle Grades Math)

Assignment: Topic 3 Review Homework

19. Graph the inequality that models the situation.

Two cities are more than 12 miles apart.

Choose the correct graph below.



20. Reasoning Graph the inequalities  $x < 3$  and  $x \geq 3$ . Are the graphs the same? Use pencil and paper to explain your reasoning.

Are the graphs the same?

- No
- Yes

21. Solve the inequality.

$$p - 4 > 9$$

What are the solutions? Select the correct choice below and fill in the answer box to complete your choice.

- A.  $p \geq \square$
- B.  $p > \square$
- C.  $p < \square$
- D.  $p \leq \square$

Student: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Instructor: Pearson School  
Course: digits - grade 6  
Book: digits, grade 6 (Middle Grades Math)

Assignment: Topic 3 Review Homework

22. Solve the inequality.

$$x \div 5 < 4$$


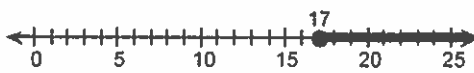
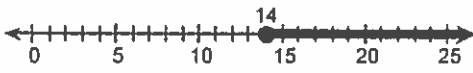
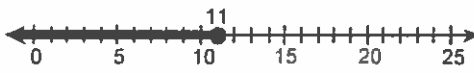
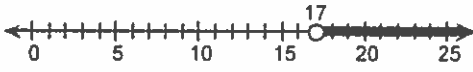

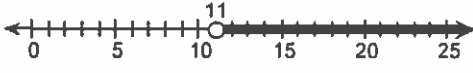
What are the solutions? Select the correct choice below and fill in the answer box to complete your choice.

- A.  $x \geq$
- B.  $x >$
- C.  $x <$
- D.  $x \leq$

23. Graph the solutions of the inequality.

$$x - 3 \geq 14$$

Choose the correct graph below.

- A. 
- B. 
- C. 
- D. 
- E. 
- F. 
- G. 
- H. 