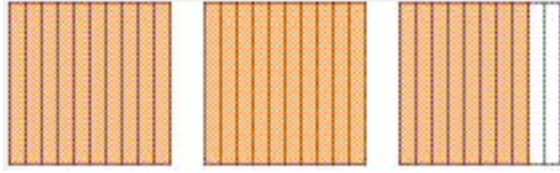
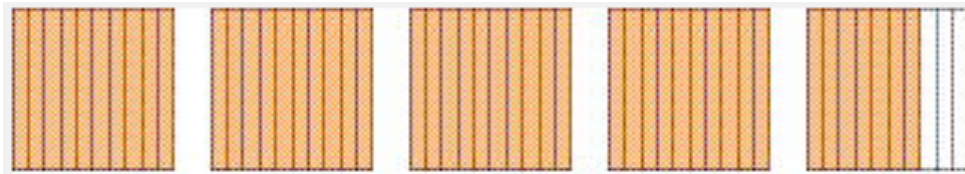


## Placement Test for *Math in Focus 4B*

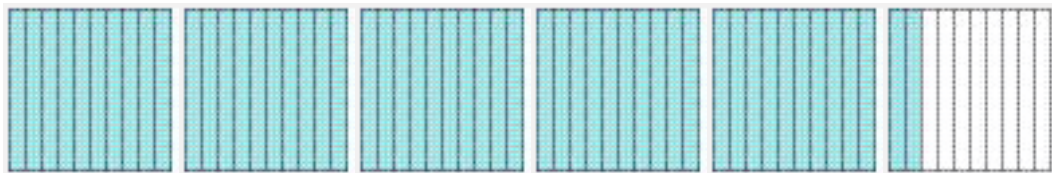
1. Write the reduced mixed number each figure represents. Then write each one as a decimal number.



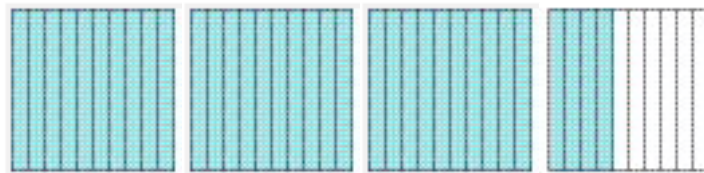
a. mixed number: \_\_\_\_\_ decimal number: \_\_\_\_\_



b. mixed number: \_\_\_\_\_ decimal number: \_\_\_\_\_



c. mixed number: \_\_\_\_\_ decimal number: \_\_\_\_\_



d. mixed number: \_\_\_\_\_ decimal number: \_\_\_\_\_

2. Arrange in increasing order: 6.6    0.6    6.06    0.006

\_\_\_\_\_

3. Which number has the digit 7 in the hundredths place? Circle your answer.

1.76      2.37      7.06      0.007

4. Express each decimal number as a fraction or a mixed number in its simplest form.

a.  $0.25 = \underline{\hspace{2cm}}$

b.  $4.75 = \underline{\hspace{2cm}}$

c.  $7.002 = \underline{\hspace{2cm}}$

d.  $0.6 = \underline{\hspace{2cm}}$

5. Express each of the following as a decimal number.

a.  $6 + \frac{4}{10} + \frac{7}{1000}$

b.  $\frac{109}{1000}$

c.  $5\frac{3}{8}$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. Solve. Express your answers as decimal numbers.

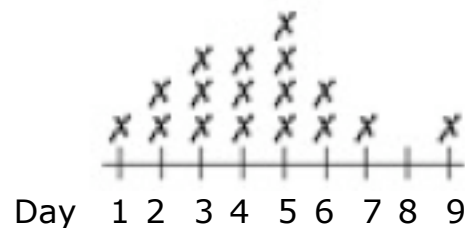
a.  $100.7 + 5.35 = \underline{\hspace{2cm}}$

b.  $0.8 + 2.44 = \underline{\hspace{2cm}}$

c.  $31 - 15.4 = \underline{\hspace{2cm}}$

d.  $68.6 - 6.27 = \underline{\hspace{2cm}}$

7. This graph shows how many hours a band practiced each day.



a. What is the mode of this set of data? \_\_\_\_\_

b. What is the mean of this set of data? \_\_\_\_\_

c. What is the median of this set of data? \_\_\_\_\_

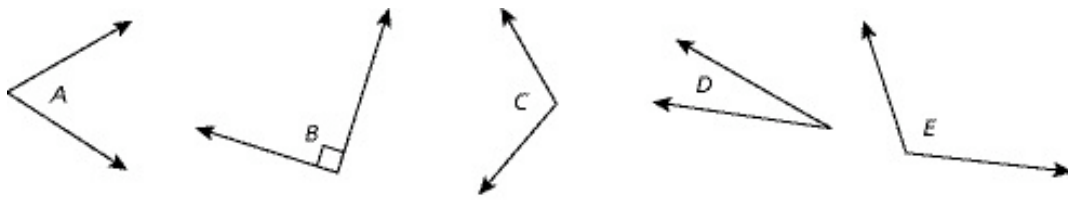
8. Jerry works 6 hours and 15 minutes at a store 6 days a week. He is paid \$9 an hour. How much does he earn each week?

He earns \$\_\_\_\_\_ each week.

9. A crate containing 6 identical books weighs 8 kg 76 g. The crate alone weighs 600 g. How much does one book weigh?

One book weighs \_\_\_\_\_ kg \_\_\_\_\_ g.

10. Study these angles. Then circle your answers to the questions.



- a. Which angle is less than  $90^\circ$  but more than  $45^\circ$ ?

angle A    angle B    angle C    angle D    angle E

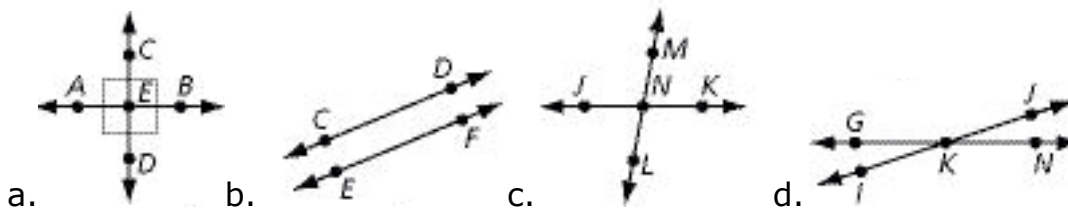
- b. Which angle is a right angle?

angle A    angle B    angle C    angle D    angle E

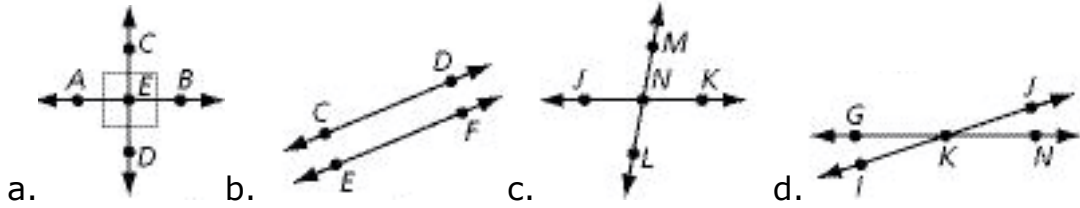
- c. Which two angles are greater than  $90^\circ$ ?

angle A    angle B    angle C    angle D    angle E

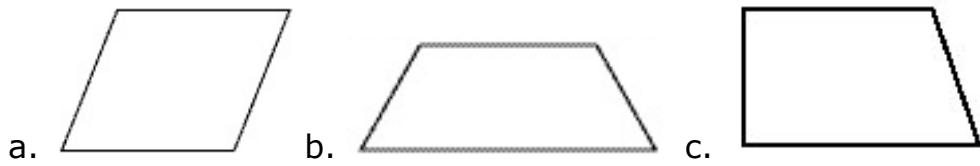
11. Circle the item that shows a pair of perpendicular lines.



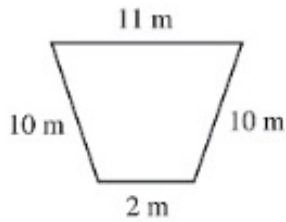
12. Circle the item that shows a pair of parallel lines.



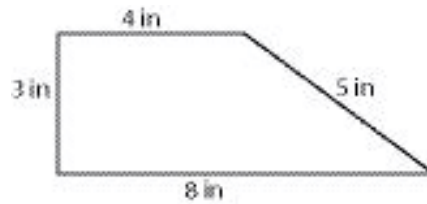
13. Which of these shapes is a parallelogram? Circle your answer.



14. Find the perimeter of these shapes.

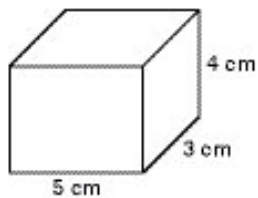


a. \_\_\_\_\_ m

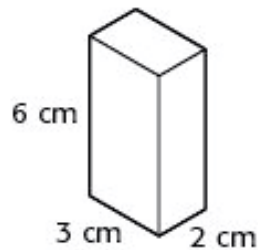


b. \_\_\_\_\_ in

15. Find the volume of each rectangular prism.

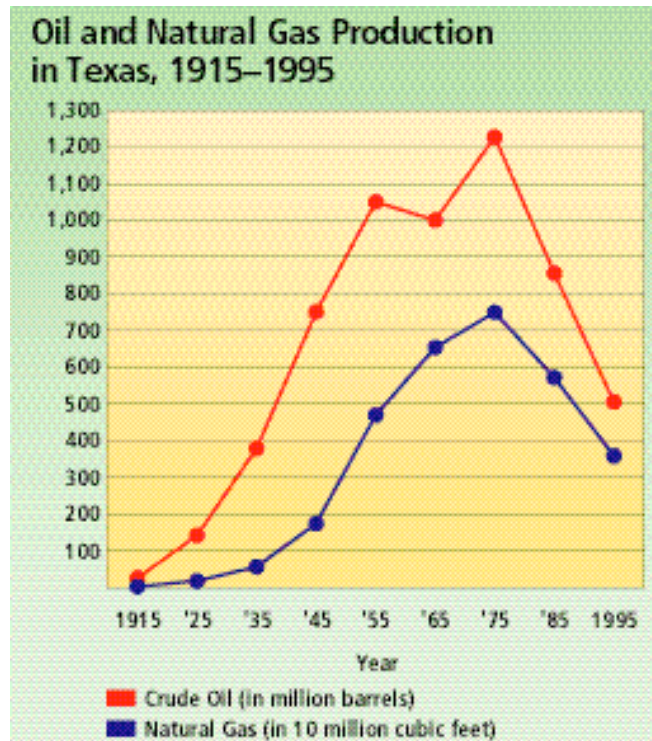


a. \_\_\_\_\_  $\text{cm}^3$



b. \_\_\_\_\_  $\text{cm}^3$

16. The line graph shows the amount of oil and gas produced in Texas between 1915 and 1995. Study the graph. Then circle your answers to the questions below.



- a. Was more oil or more gas produced overall?

oil          gas

- b. How many million barrels of oil were produced in 1985?

590          850          500

- c. In what year was the most gas produced?

1945          1955          1975

- d. How much more oil than gas was produced in 1965?

350 million barrels          450 million barrels          550 million barrels

17. Multiply or divide in compound units.

a.  $4 \text{ yd } 2 \text{ ft} \times 7 = \underline{\hspace{2cm}} \text{ yd } \underline{\hspace{2cm}} \text{ ft}$

b.  $5 \text{ m } 45 \text{ cm} \times 3 = \underline{\hspace{2cm}} \text{ m } \underline{\hspace{2cm}} \text{ cm}$

c.  $12 \text{ qt } 3 \text{ c} \div 3 = \underline{\hspace{2cm}} \text{ qt } \underline{\hspace{2cm}} \text{ c}$

d.  $6 \text{ h } 45 \text{ min} \div 3 = \underline{\hspace{2cm}} \text{ h } \underline{\hspace{2cm}} \text{ min}$

18. A meter of fabric costs \$1.50. Mrs. Dupont bought 15.5 meters of fabric. She used 8.75 meters to make some curtains. She used the rest of the fabric to cover 3 chairs.

a. How much fabric did Mrs. Dupont use for each chair?

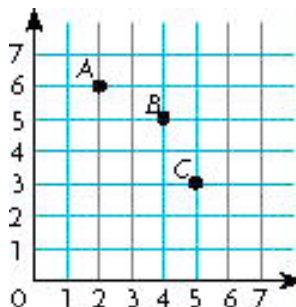


She used        m for each chair.

b. Mrs. Dupont paid for the fabric with a 20-dollar bill and a 10-dollar bill. How much change did she get back?

She got back \$      .

19. Write the ordered pair for each of the points on the grid.



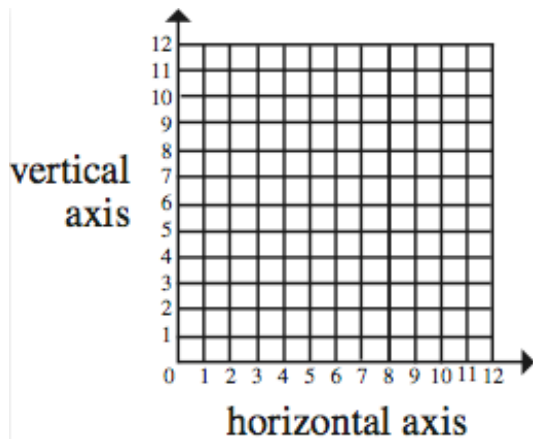
A.       ,       

B.       ,       

C.       ,

20. a. Mark the following coordinates by drawing dots on the grid:

(5, 3), (5, 11), (11, 3), (11, 11)

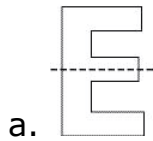


b. Connect the dots to form a rectangle.

c. If each square in the grid is 1 cm, what is the area of the rectangle?

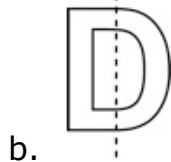
\_\_\_\_\_ cm<sup>2</sup>

21. Are the dotted lines in these shapes lines of symmetry?



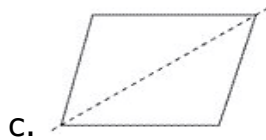
yes

no



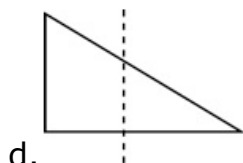
yes

no



yes

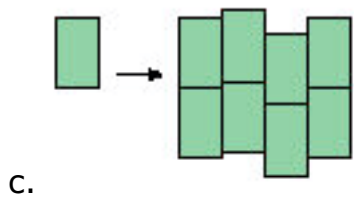
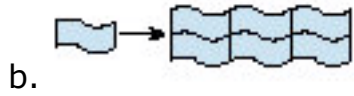
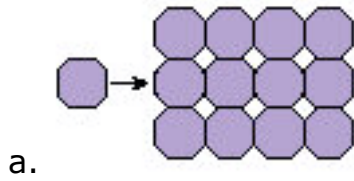
no



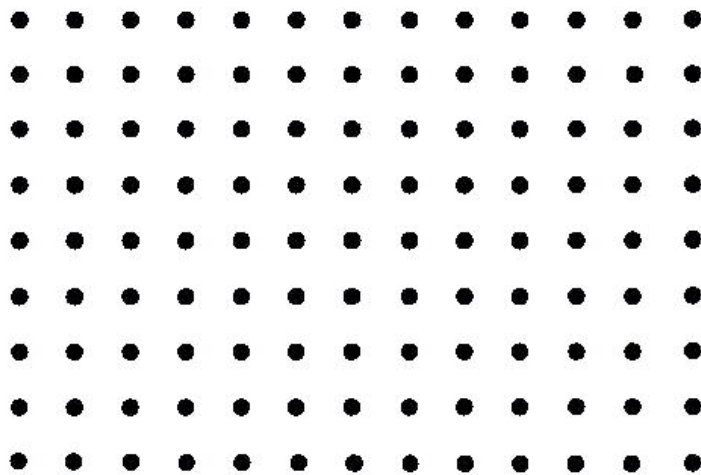
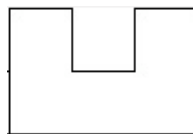
yes

no

22. Which of these shapes is NOT an example of a tessellation? Circle your answer.



23. Draw a tessellation on the dotted grid. Repeat the shape below six times.





### Math in Focus 4B Placement Test Answer Key

Point values are indicated in parentheses next to each item number; 100 points total. If student's score is 80 or more, consider starting with level 5A.

1. (8 points)

- a.  $2\frac{4}{5}$ , 2.8
- b.  $4\frac{7}{10}$ ; 4.7
- c.  $5\frac{1}{5}$ , 5.2
- d.  $3\frac{2}{5}$ , 3.4

2. (1 point)

0.006, 0.6, 6.06, 6.6

3. (1 point)

2.37

4. (8 points)

- a.  $4\frac{1}{4}$
- b.  $4\frac{3}{4}$
- c.  $7\frac{1}{500}$
- d.  $5\frac{3}{5}$

5. (6 points)

- a. 6.407
- b. 0.109
- c. 5.375

6. (8 points)

- a. 106.05
- b. 3.24
- c. 15.6
- d. 62.33

7. (6 points)

- a. 1
- b. 1.89
- c. 2

8. (2 points)

He earns \$337.50 each week.

9. (2 points)

One book weighs 1 kg 246 g.

10. (6 points)

- a. angle A
- b. angle B
- c. angle C and angle E

11. (2 points)

a

12. (2 points)

b

13. (2 points)

a

14. (4 points)

- a. 33 m
- b. 20 in.

15. (4 points)

- a.  $60\text{ cm}^3$
- b.  $36\text{ cm}^3$

16. (8 points)

- a. oil
- b. 850
- c. 1975
- d. 350 million barrels

17. (4 points)

- a. 32 yd 2 ft
- b. 16 m 35 cm
- c. 4 qt 1 c
- d. 2 h 15 min

18. (4 points)

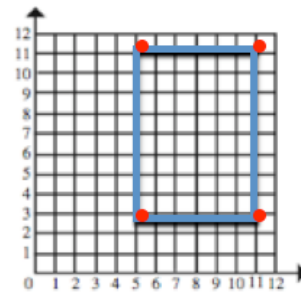
- a. She used 2.25 m for each chair.
- b. She got back \$6.75.

19. (6 points)

- a. 2, 6
- b. 4, 5
- c. 5, 3

20. (6 points)

a. and b.



c.  $48\text{ cm}^2$

21. (4 points)

- a. yes
- b. no
- c. no
- d. no

22. (2 points)

- a

23. (4 points)

Answers will vary. Possible answer:

