Unit 1: WHOLE NUMBERS (PART 1)

Examples:

1. What does the digit 4 stand for in 71,439?

   4 hundreds or **400**

2. What is 50,000 more than 8,395?

   50,000 + 8,395 = **58,395**

3. Complete the number pattern.

   78,436, **79,486**, 80,536, 81,586

   81,586 – 80,536 = 1,050

   78,436 + 1,050 = 79,486

Write the following numbers as words on the lines.

1. 23,701 _____

2. 40,825 _____

3. 68,090 _____

4. 55,002 _____

5. 14,011 _____

Write the correct numbers in numerals on the lines.

6. eleven thousand, six hundred, two _____

7. ninety-two thousand, three hundred, fourteen _____

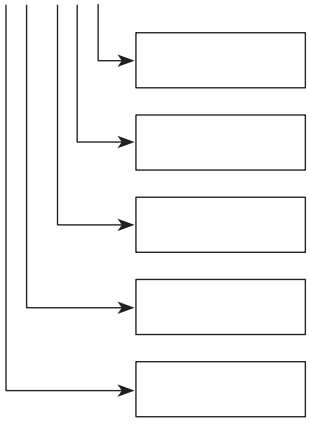
8. fifty-seven thousand, twelve _____

9. sixty thousand, two hundred, forty-five _____

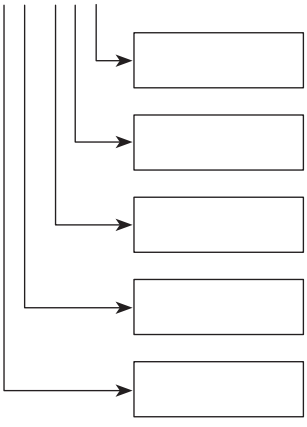
10. eighty-two thousand, one _____

Write the correct value of each digit in its box.

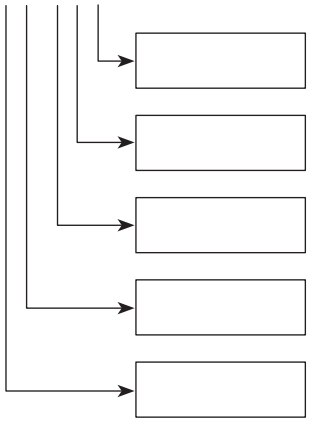
11. 15,326



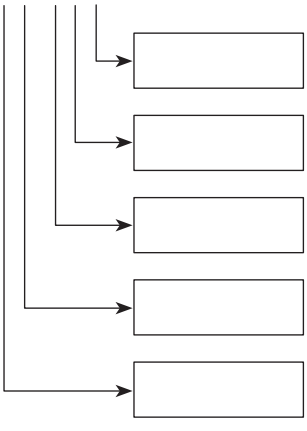
13. 78,035



12. 58,217



14. 81,420



Fill in each blank with the correct answer.

15. In 64,925, the digit 6 is in the _____ place.

16. In 80,647, the digit 4 is in the _____ place.

17. In 38,416, the digit _____ is in the thousands place.

18. In 73,029, the digit _____ is in the hundreds place.

19. In 81,246,

    (a) the digit 8 stands for _____.

    (b) the digit 1 stands for _____.

    (c) the digit 2 stands for _____.

    (d) the digit 4 stands for _____.

    (e) the digit 6 stands for _____.

20. 5,217 = 5 thousands + _____ hundreds + 1 ten + 7 ones

21. 1,106 = 1 thousand + _____ hundred + 6 ones

22. 35,248 = _____ ten thousands + 5 thousands + 2 hundreds + 4 tens + 8 ones

23. 50,364 = 5 ten thousands + 3 hundreds + _____ tens + 4 ones

24. 63,724 = 60,000 + _____ + 700 + 20 + 4

25. 30,517 = 30,000 + 500 + _____ + 7

26. 10,000 + _____ + 100 = 19,100

27. 3,000 + _____ + 30 + 6 = 3,136

28. 88,627 = _____ + 8,000 + 600 + 20 + 7

29. Circle the greater number.

48,165 49,561

30. Circle the greater number.

98,075 97,085

31. Circle the smaller number.

13,986 13,689

32. Circle the smaller number.

10,738 9,173

Arrange the following numbers in ascending order.

33. 5,931, 1,359, 1,593, 5,319

_____

34. 14,632, 41,562, 24,163, 12,643

_____

35. 6,845, 4,586, 8,564, 4,685

_____

Arrange the following numbers in descending order.

36. 7,014, 1,407, 7,410, 1,740

_____

37. 39,628, 26,983, 63,892, 96,268

_____

38. 2,653, 3,652, 5,236, 5,362

_____

Complete the number patterns.

39. 226, 246, 266, _____, _____

40. 33,045, 33,050, _____, _____, 33,065

41. _____, 7,540, 7,550, _____, 7,570

42. 87,455, 88,455, 89,455, _____, _____

Fill in each blank with the correct answer.

43. _____ is 100 less than 43,112.

44. _____ is 20 less than 94,606.

45. _____ is 2,000 more than 18,096.

46. _____ is 1,000 more than 80,493.

47. 3,000 less than 21,475 is _____.

48. 100 less than 10,000 is _____.

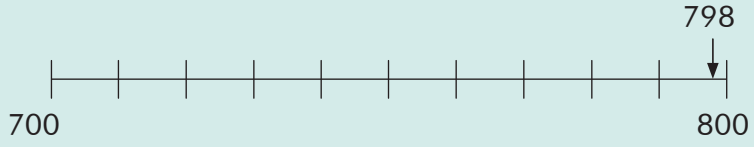
49. 6,000 more than 4,381 is _____.

50. 99 more than 90,000 is _____.

Unit 2: WHOLE NUMBERS (PART 2)

Examples:

1. Round 798 to the nearest hundred.



798 ≈ **800**

2. Estimate the value of 351 – 87.

351 – 87 ≈ 350 – 90 = **260**

3. Estimate the value of 384 ÷ 8.

384 ÷ 8 ≈ 400 ÷ 8 = **50**

4. Find all the factors of 40.

40 = 1 × 40
40 = 2 × 20
40 = 4 × 10
40 = 5 × 8

The factors of 40 are **1**, **2**, **4**, **5**, **8**, **10**, **20**, and **40**.

5. Find the first five multiples of 8.

8, **16**, **24**, **32**, and **40**

Round the following numbers to the nearest ten.

1. 771 ≈ _____

2. 848 ≈ _____

3. 661 ≈ _____

4. 296 ≈ _____

5. 1,087 ≈ _____

6. 1,782 ≈ _____

7. 39,917 ≈ _____

8. 46,547 ≈ _____

9. 11,201 ≈ _____

10. 59,999 ≈ _____

Round the following numbers to the nearest hundred.

11. 536 ≈ _____

12. 881 ≈ _____

13. 3,084 ≈ _____

14. 1,117 ≈ _____

15. 6,944 ≈ _____

16. 89,544 ≈ _____

17. 23,891 ≈ _____

18. 12,057 ≈ _____

19. 61,272 ≈ _____

20. 74,808 ≈ _____

Round the following numbers to the nearest ten and estimate their values.

21. 36 + 12 ≈ _____

22. 672 + 48 ≈ _____

23. 66 + 725 ≈ _____

24. 932 – 19 ≈ _____

25. 419 – 38 ≈ _____

26. 519 – 21 ≈ _____

Estimate the value.

27. $48 \times 8 \approx$ _____

28. $25 \times 7 \approx$ _____

29. $301 - 9 \approx$ _____

30. $697 - 88 \approx$ _____

31. $118 \div 4 \approx$ _____

32. $324 \div 5 \approx$ _____

33. $463 + 93 + 551 \approx$ _____

34. $876 + 121 + 43 \approx$ _____

Fill in each blank with the correct answer.

35. $12 =$ _____ $\times$ _____

$12 =$ _____ $\times$ _____

$12 =$ _____ $\times$ _____

The factors of 12 are _____, _____, _____, _____, _____, and _____.

36. $42 =$ _____ $\times$ _____

$42 =$ _____ $\times$ _____

$42 =$ _____ $\times$ _____

$42 =$ _____ $\times$ _____

The factors of 42 are _____, _____, _____, _____, _____, _____, _____, and _____.

37. 36 = _____ × _____

36 = _____ × _____

36 = _____ × _____

36 = _____ × _____

36 = _____ × _____

The factors of 36 are _____, _____, _____, _____, _____, _____, _____, _____, and _____.

38. (a) The factors of 8 are _____.

(b) The factors of 16 are _____.

(c) The common factors of 8 and 16 are _____.

39. (a) The factors of 14 are _____.

(b) The factors of 28 are _____.

(c) The common factors of 14 and 28 are _____.

40. (a) The factors of 9 are _____.

(b) The factors of 18 are _____.

(c) The common factors of 9 and 18 are _____.

41. The first four multiples of 5 are _____, _____, _____, and _____.

42. The first three multiples of 9 are _____, _____, and _____.

43. The third multiple of 6 is _____.

44. The seventh multiple of 5 is _____.

45. (a) The first six multiples of 2 are _____, _____, _____, _____, _____, and _____.

(b) The first six multiples of 3 are _____, _____, _____, _____, _____, and _____.

(c) The two common multiples of 2 and 3 are _____ and _____.

46. (a) The first six multiples of 4 are _____, _____, _____, _____, _____, and _____.

(b) The first six multiples of 8 are _____, _____, _____, _____, _____, and _____.

(c) The three common multiples of 4 and 8 are _____, _____, and _____.

Write your answers on the lines.

47. A train traveled 13,769 km from City A to City B. Then, it traveled another 25,325 km to City C. What was the estimated distance traveled by the train from City A to City C? Round each number to the nearest hundred and estimate the value.

_____

48. A number, when added to 7,982, is 25,000. Round this number to the nearest ten.

_____

49. There were 1,345 books left in a bookstore. If the shopkeeper had sold 7,609 books in the past month, how many books were in the bookstore at first? Round the answer to the nearest ten.

_____

50. In a school, there are 1,124 students in the morning session. There are 259 more students in the afternoon session than in the morning session. How many students are in the school when rounded to the nearest hundred?

_____

51. What is the smallest two-digit number that has only 4 factors?

_____

52. 8 is a factor of number X. It is between 50 and 60. What is number X?

_____

53. Number Y is a multiple of 8. It is between 20 and 30. It is also a factor of 48. What is number Y?

_____

54. If 32 is the fourth multiple of a number, what is the number?

_____

55. The two common multiples of 2 one-digit numbers are 14 and 28. If 1 is not the answer, what are the 2 one-digit numbers?

_____

REVIEW 1

Choose the correct answer. Write its number in the parentheses.

1. Which of the following shows the correct numeral for seventy-two thousand, eight hundred, forty-five?

   (1) 72,845 (3) 78,245
   (2) 72,854 (4) 78,254 ( )

2. The digit 8 in 28,095 stands for _____.

   (1) 8 ten thousands (3) 8 hundreds
   (2) 8 thousands (4) 8 tens ( )

3. Which of the following is **not** a common multiple of 8 and 6?

   (1) 18 (3) 72
   (2) 24 (4) 144 ( )

4. Round each number to the nearest ten and estimate the value of 1,987 + 5,248.

   (1) 7,220 (3) 7,240
   (2) 7,230 (4) 7,250 ( )

5. Which of the following is a common factor of 28 and 36?

   (1) 3 (3) 6
   (2) 4 (4) 8 ( )

6. 9,050, _____, 7,030, 6,020, 5,010.

   What is the missing number in the pattern?

   (1) 8,020 (3) 8,040
   (2) 8,030 (4) 8,050 ( )

7. Which of the following has the greatest value?

(1) 2,000 less than 10,000
(2) 2,000 less than 8,000
(3) 2,000 more than 1,000
(4) 2,000 more than 800 ( )

8. Which of the following shows the first four multiples of 7?

(1) 7, 14, 20, 27
(2) 7, 14, 21, 28
(3) 7, 14, 28, 35
(4) 7, 14, 28, 42 ( )

9. 49,753 = _____ + 9 thousands + 7 hundreds + 5 tens + 3 ones

(1) 400 ten thousands
(2) 40 ten thousands
(3) 4 ten thousands
(4) 4 thousands ( )

10. Estimate the value of 404 × 9.

(1) 3,600
(2) 3,636
(3) 3,645
(4) 4,000 ( )

Write your answers on the lines.

11. Write 49,005 in words.

_____

12. In 94,857, the digit 4 is in the ☐ place. _____

13. Arrange these numbers in ascending order.

15,050, 15,005, 15,500

_____

14. Round each number to the nearest ten and estimate its value.

559 + 19 + 942 ≈ ☐ _____

15. The seventh multiple of 9 is ☐. _____

16. Round 89,091 to the nearest hundred. _____

17. 50 thousands + 90 tens + 7 ones = ☐ _____

18. List all the factors of 45. _____

19. Add 18,360 and 2,598. The digit ☐ is in the thousands place.

_____

20. List the first two common multiples of 4 and 6. _____

Unit 3: WHOLE NUMBERS (PART 3)

Examples:

1.
$$\begin{array}{r} {\scriptstyle 4\ \ 5} \\ 8,046 \\ \times\quad 9 \\ \hline \underline{72,414} \end{array}$$

2.
$$\begin{array}{r} {\scriptstyle 1\ \ 1} \\ {\scriptstyle 5\ \ 6} \\ 368 \\ \times\quad 28 \\ \hline 2944 \\ 736 \\ \hline \underline{10,304} \end{array}$$

3.
$$\begin{array}{r} 1,557 \\ 6\overline{)\,9,342} \\ 6 \\ \hline 33 \\ 30 \\ \hline 34 \\ 30 \\ \hline 42 \\ 42 \\ \hline 0 \end{array}$$

Solve the following problems. Show your work.

1. 412×4

2. 547×2

3. 610×5

4. 935×3

5. 109×7

6. $5,317 \times 6$

7. $2,011 \times 8$

8. $6,028 \times 9$

9. $1,526 \times 5$

10. $8,437 \times 8$

11. $\begin{array}{r} 46 \\ \times\ 18 \\ \hline \end{array}$

12. $\begin{array}{r} 35 \\ \times\ 20 \\ \hline \end{array}$

13. $\begin{array}{r} 67 \\ \times\ 36 \\ \hline \end{array}$

14. $\begin{array}{r} 91 \\ \times\ 27 \\ \hline \end{array}$

15. $\begin{array}{r} 89 \\ \times\ 16 \\ \hline \end{array}$

16. $\begin{array}{r} 126 \\ \times\ 50 \\ \hline \end{array}$

17. $\begin{array}{r} 625 \\ \times\ 73 \\ \hline \end{array}$

18. $\begin{array}{r} 619 \\ \times\ 24 \\ \hline \end{array}$

19. $\begin{array}{r} 281 \\ \times\ 53 \\ \hline \end{array}$

20. $\begin{array}{r} 380 \\ \times\ 36 \\ \hline \end{array}$

Solve the following problems. Show your work.

21. $5\overline{)1,355}$

22. $3\overline{)4,827}$

23. $2\overline{)9,804}$

24. $8\overline{)6,088}$

25. $6\overline{)1,458}$

26. $3\overline{)1,131}$

Fill in each blank with the correct answer.

27. 18×20 = _____ × _____ tens

= _____ tens

= _____

28. 69×40 = _____ × _____ tens

= _____ tens

= _____

29. $98 \times 30 =$ _____ $\times$ _____ tens

$=$ _____ tens

$=$ _____

30. $53 \times 60 =$ _____ $\times$ _____ $\times 10$

$=$ _____ $\times 10$

$=$ _____

31. $77 \times 90 =$ _____ $\times$ _____ $\times 10$

$=$ _____ $\times 10$

$=$ _____

32. $42 \times 80 =$ _____ $\times$ _____ $\times 10$

$=$ _____ $\times 10$

$=$ _____

33. $4{,}569 \div 8 =$ _____ R _____

34. $1{,}348 \div 5 =$ _____ R _____

35. $4{,}240 \div 7 =$ _____ R _____

36. $3{,}134 \div 4 =$ _____ R _____

37. $9{,}381 \div 9 =$ _____ R _____

38. $59 \times 17 \approx$ _____ $\times$ _____

$=$ _____

39. $623 \times 55 \approx$ _____ $\times$ _____

$=$ _____

40. $917 \times 31 \approx$ _____ $\times$ _____

$=$ _____

41. $237 \div 5 \approx$ _____ $\div 5$

$=$ _____

42. $4{,}927 \div 7 \approx$ _____ $\div 7$

$=$ _____

43. $8{,}080 \div 9 \approx$ _____ $\div 9$

$=$ _____

44. (a) Multiply 84 by 52. _____

(b) Estimate the value of 84×52. _____

(c) State if your actual answer is reasonable. _____

45. (a) Multiply 409 by 93. _____

(b) Estimate the value of 409×93. _____

(c) State if your actual answer is reasonable. _____

46. (a) Multiply 976 by 38. _____

(b) Estimate the value of 976×38. _____

(c) State if your actual answer is reasonable. _____

47. (a) Divide 43 by 8. _____

(b) Estimate the value of 43 ÷ 8. _____

(c) State if your actual answer is reasonable. _____

48. (a) Divide 538 by 6. _____

(b) Estimate the value of 538 ÷ 6. _____

(c) State if your actual answer is reasonable. _____

49. (a) Divide 8,765 by 4. _____

(b) Estimate the value of 8,765 ÷ 4. _____

(c) State if your actual answer is reasonable. _____

Solve the following story problems. Show your work in the space below.

50. There are 255 balloons in a package. How many balloons are there in a dozen packages?

51. A factory makes 2,275 watches in a week. How many watches does it make in 3 days?

52. A shirt costs $253 and a tie costs $78. David bought 4 shirts and 3 ties. How much did he spend altogether?

53. A purse costs 4 times as much as a dress. If the purse costs $276, how much does Anna spend on the purse and 3 dresses?

54. Jason had some marbles. He gave 35 marbles to each of his 4 brothers and still had 219 marbles left. How many marbles did Jason have to begin with?

55. 114 men and 686 women went to a concert. Each ticket cost $17. How much money was collected in all?

56. A baker bakes 840 loaves of bread in a day. How many loaves of bread will he bake in 6 weeks?

57. Cecilia has 896 stickers. She gives 50 stickers to seven of her friends. She sorts the remaining stickers equally into three albums. How many stickers are there in each album?

58. There were 400 pieces of candy in a package. The principal of a school bought 25 packages for 2,000 children on Halloween.

    (a) How many pieces of candy did the principal buy altogether?

    (b) If each child was given 7 pieces, how many more packages were needed?

59. Kimi is 16 years old and her mother is 44 years old this year. How many years ago was Kimi's mother five times as old as Kimi?

60. A stereo costs $328. A television set costs four times as much as the stereo. Mr. Simon buys the stereo and the television set and pays for them in eight monthly installments. How much must he pay for them each month?

61. Michael had $3,600. After spending $320, he still had twice as much as Cynthia. Find the total amount of money they had in the beginning.

62. Luis bought a book and four identical pens for $12. Carlos bought the same book and two similar pens. Carlos paid $4 less than Luis. What was the cost of the book?

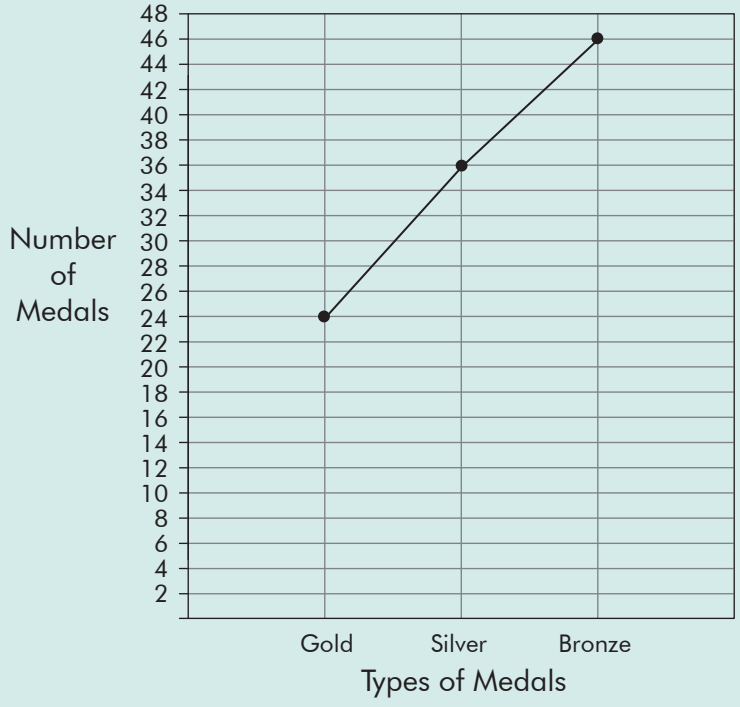
63. 250 adults and some children went to the zoo. The admission ticket for each adult was $12 and the admission ticket for each child was $9. If $6,915 was collected for all the tickets, how many children went to the zoo?

64. Mr. Ortiz received a bonus. He gave $2,000 to his wife and distributed an amount of money equally among his six children. He was left with $1,350, which was $400 more than the amount of money he gave to each child. How much was his bonus?

Unit 4: LINE GRAPHS AND TABLES

Example:

The line graph shows the number of gold, silver, and bronze medals given out during an international sports meet.



1. How many gold medals were given out?

   24

2. How many silver and bronze medals were given out?

   36 + 46 = **82** silver and bronze medals

3. How many more bronze than gold medals were given out?

   46 – 24 = **22** more bronze medals

4. If there were 58 participants who did not receive any medals, how many participants were there altogether?

   24 + 36 + 46 + 58 = **164** participants

Study the table below and answer questions 1 to 5.

The table shows the number of animals Mario saw in a park.

Animals	Spider	Bird	Cat	Worm
Number of animals	8	?	3	8

1. If there were 30 animals in the park, how many birds were there?

   _____

2. Which animal did Mario see the most in the park? _____

3. Which animal did Mario see the least in the park? _____

4. How many more birds than worms did Mario see? _____

5. If 3 birds, 5 worms, and 4 spiders left the park, how many animals remained in the park?

   _____

Study the data below and answer questions 6 to 11.

Mr. Cox recorded the number of mobile phones he sold over five months in the table below.

November	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
December	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
January	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
February	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
March	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸

6. Use numbers to complete the table using the data.

Months	Number of mobile phones sold
November	
December	
January	
February	
March	

7. In which month did Mr. Cox sell the most number of mobile phones?

_____

8. How many more mobile phones did Mr. Cox sell in February than in December?

_____

9. How many mobile phones were sold altogether in the two months with the highest sales?

_____

10. If the number of mobile phones sold in April was twice as many as those sold in March, how many mobile phones were sold in April?

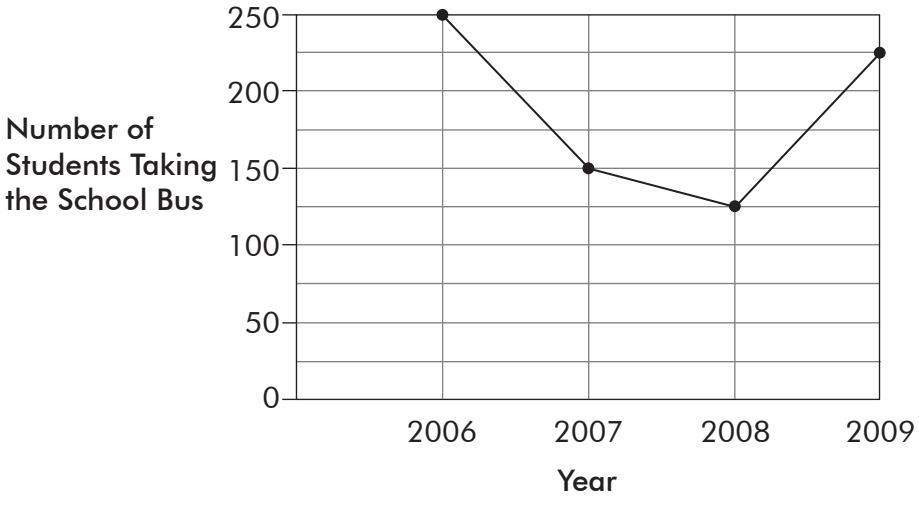
_____

11. If each mobile phone was sold for $102, how much money did Mr. Cox make in February and March?

_____

Study the line graph and answer questions 12 to 16.

The line graph shows the number of students taking the school bus over a few years.



12. How many students took the school bus in 2007? _____

13. In which year was the number of students taking the school bus the greatest?

_____

14. What was the increase in the number of students taking the school bus from 2008 to 2009?

_____

15. What was the difference between the year with the greatest number of students taking the school bus and the year with the lowest number of students taking the school bus?

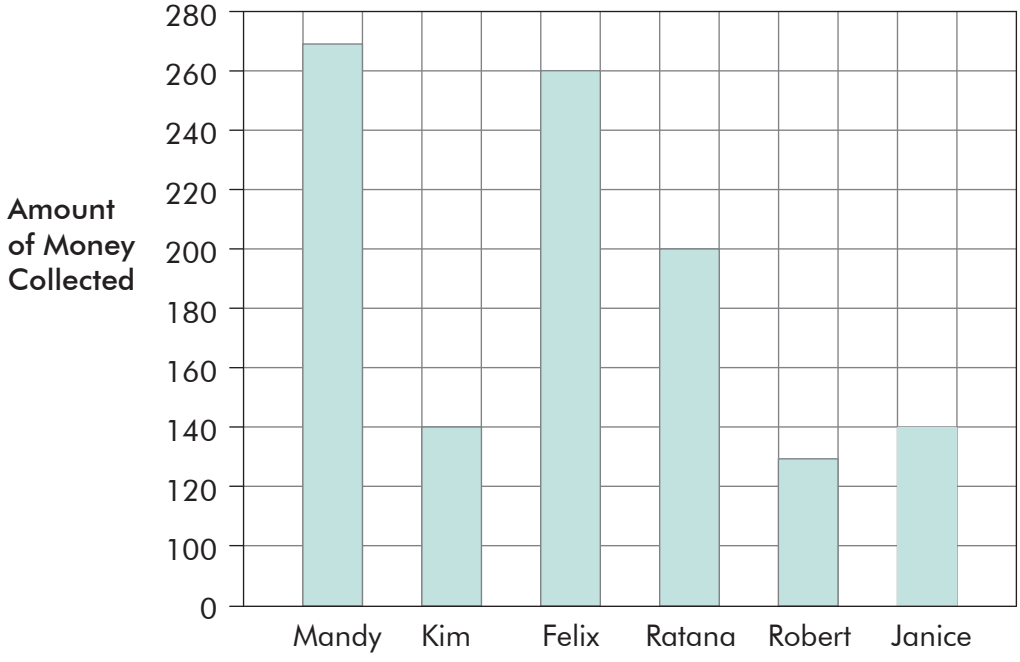
_____

16. How many students took the school bus from 2006 to 2009?

_____

Study the bar graph and answer questions 17 to 22.

The bar graph shows the amount of money collected by six children in a donation drive.



17. Using the data from the bar graph, complete the table below.

Name	Amount of money collected
Mandy	
Kim	
Felix	
Ratana	
Robert	
Janice	

18. Who collected more than $200? _____

19. Which two children collected the same amount of money? _____

20. Who collected twice as much money as Robert? _____

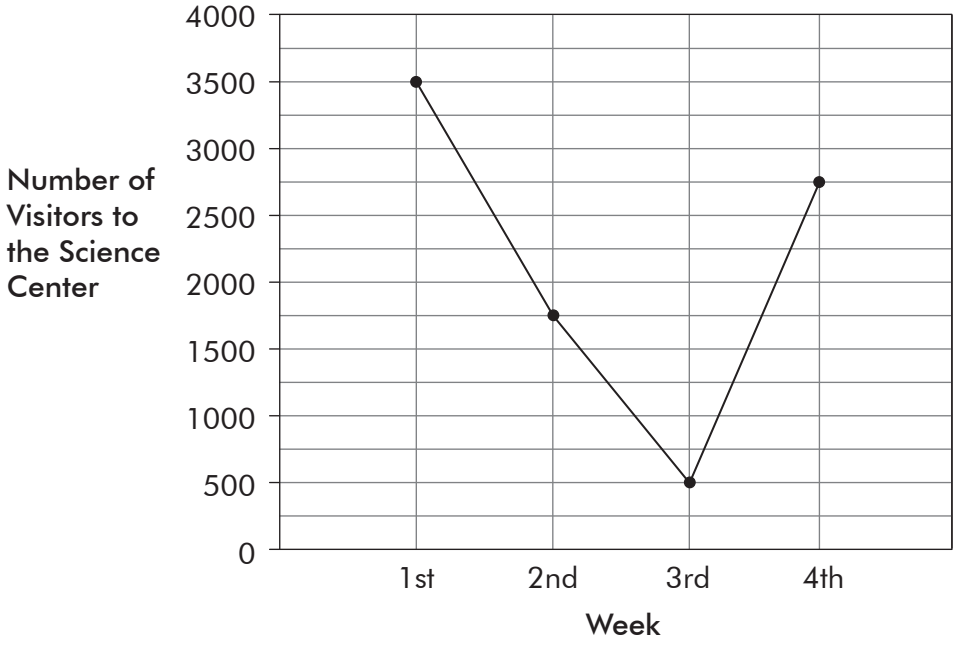
21. How much money was collected altogether? _____

22. How much more money did the children have to collect in order to reach $2,000?

_____

Study the line graph below and answer questions 23 to 27.

The line graph shows the number of visitors to the science center in a month.



23. In which week was the number of visitors the least? _____

24. What was the increase in the number of visitors from the 3rd to the 4th week?

_____

25. What was the decrease in the number of visitors from the 1st to the 2nd week?

_____

26. What was the difference in the week with the greatest number of visitors and the week with the lowest number of visitors?

_____

27. If each admission ticket cost $9, how much did the science center collect during the four weeks?

_____

REVIEW 2

Choose the correct answer. Write its number in the parentheses.

1. The product of 943 and 57 is _____.

   (1) 886
   (2) 1,000
   (3) 53,175
   (4) 53,751 ( )

2. The quotient of 7,256 ÷ 10 is _____.

   (1) 6
   (2) 56
   (3) 72
   (4) 725 ( )

The table shows the heights of four boys. Study the table below and answer questions 3 and 4.

Name	Height
Hakeem	140 cm
Salim	?
Colin	142 cm
Derrick	136 cm

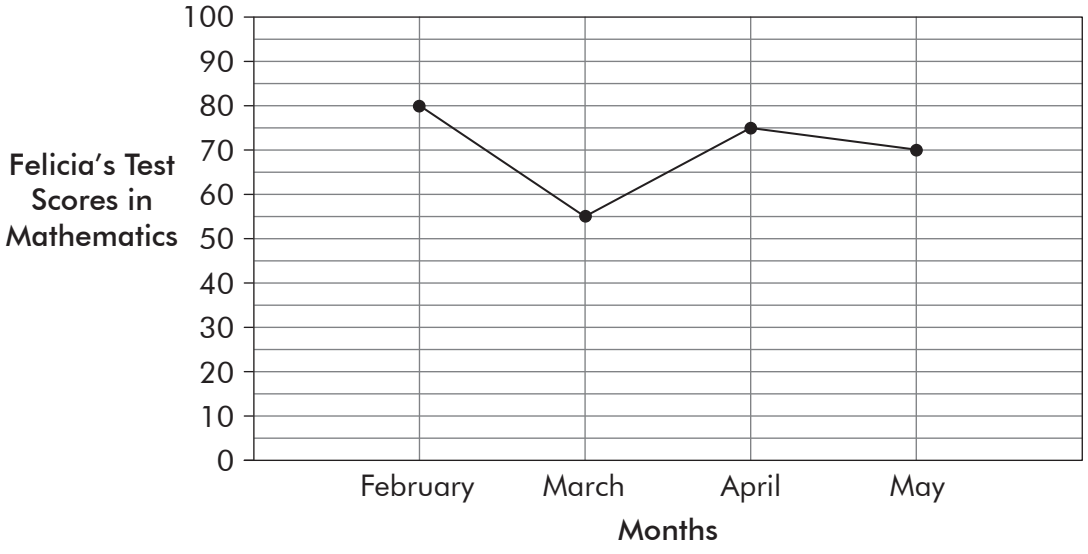
3. If the total height of the four boys is 557 cm, what is Salim's height?

   (1) 138 cm
   (2) 139 cm
   (3) 140 cm
   (4) 141 cm ( )

4. What is the difference between Salim's height and Derrick's height?

   (1) 2 cm
   (2) 3 cm
   (3) 4 cm
   (4) 6 cm ( )

The line graph shows Felicia's test scores in mathematics from February to May. Study the line graph and answer questions 5 to 7.



5. What was Felicia's test score in mathematics in March?

(1) 65 (3) 55
(2) 60 (4) 50 ( )

6. What was the difference between Felicia's test scores in mathematics in February and in May?

(1) 5 (3) 15
(2) 10 (4) 20 ( )

7. In which month did Felicia score the highest in mathematics?

(1) February (3) April
(2) March (4) May ( )

Write your answers on the lines.

8. When a number is divided by 8, the answer is 52. What is the number? _____

9. Estimate the value of 1,785 × 3. _____

10. 6,123 ÷ 4 = ☐ _____

The table shows the number of stamps and coins Dora collected from four different countries. Study the table below and answer questions 11 to 13.

Country	Stamps	Coins
Malaysia	394	127
Indonesia	?	245
Thailand	125	169
Philippines	178	88

11. If Dora collected a total of 947 stamps, how many Indonesian stamps did she collect?

_____

12. What was the total number of coins collected by Dora? _____

13. How many more stamps than coins did Dora collect? _____

14.
$$\begin{array}{r} 205 \\ \times \quad 83 \\ \hline \end{array}$$

15. $8\overline{)7,916}$

Solve the following story problems. Show your work in the space below.

16. Mrs. Kim bought two boxes of pens. Both boxes contained a total of 900 pens. The bigger box contained 120 more pens than the other one. How many pens were in the smaller box?

17. Mr. Santiago bought 36 bicycles, each at $159. He sold all of them for $8,000. How much money did he earn?

18. Tai has 1,230 beads. He has three times as many beads as Reta. Veronica has half as many beads as Reta. How many beads do the three children have altogether?

19. A publisher printed 3,000 books. 54 books were found to be defective and thrown away, and the rest were sold at $9 each. How much money did the publisher make from the sale of the books?

20. A factory makes 1,395 remote-controlled cars in a week.

    (a) How many remote-controlled cars can the factory make in eight weeks?

    (b) If the factory needs to make 40,455 remote-controlled cars in nine weeks, how many remote-controlled cars must the factory make in a week?

Unit 5: FRACTIONS

Examples:

1. Convert $\frac{16}{7}$ into a mixed number.

$$\frac{16}{7} = \frac{14}{7} + \frac{2}{7} = 2 + \frac{2}{7} = \mathbf{2\frac{2}{7}}$$

2. Convert $4\frac{5}{9}$ into an improper fraction.

$$4\frac{5}{9} = \frac{36}{9} + \frac{5}{9} = \mathbf{\frac{41}{9}}$$

3. What is the sum of $\frac{2}{3}$ and $\frac{8}{9}$? Write your answer in its simplest form.

$$\frac{2^{\times 3}}{3^{\times 3}} + \frac{8}{9} = \frac{6}{9} + \frac{8}{9} = \frac{14}{9} = \mathbf{1\frac{5}{9}}$$

4. Find the value of $\frac{1}{3}$ of 72.

$$\frac{1}{\cancel{3}_{1}} \times \overset{24}{\cancel{72}} = \mathbf{24}$$

Write the correct mixed number on the lines.

1. $3 + \frac{1}{2} =$ _____

2. $6 + \frac{2}{3} =$ _____

3. $5 + \frac{1}{4} =$ _____

4. $9 + \frac{1}{12} =$ _____

5. $7 + \frac{5}{7} =$ _____

6. $\frac{5}{8} + 4 =$ _____

7. $\frac{4}{9} + 1 =$ _____

8. $\frac{3}{5} + 2 =$ _____

9. $\frac{1}{6} + 8 =$ _____

10. $\frac{9}{11} + 3 =$ _____

Fill in each blank with the correct answer.

11. 

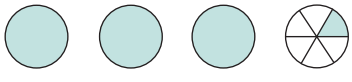
_____ wholes and _____ fifths = _____

12. 

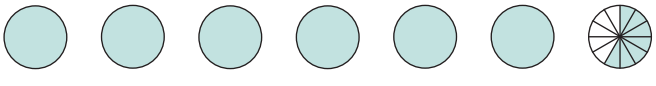
_____ wholes and _____ sevenths = _____

13. 

_____ wholes and _____ eighths = _____

14. 

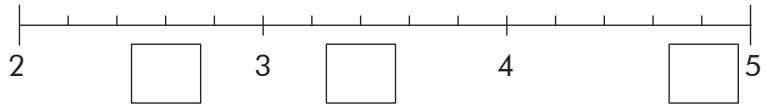
_____ wholes and _____ sixth = _____

15. 

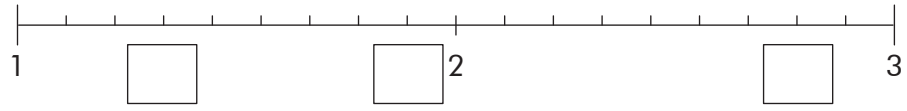
_____ wholes and _____ twelfths = _____

For each number line, write the correct mixed number in each box.

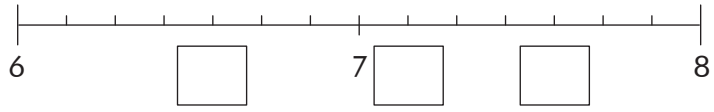
16.



17.



18.



Fill in each blank with the correct answer.

19. $2 =$ _____ halves

20. $3\frac{1}{3} =$ _____ thirds

21. $5\frac{7}{11} =$ _____ elevenths

22. $1\frac{9}{12} =$ _____ twelfths

23. $8\frac{5}{7} =$ _____ sevenths

24. There are _____ quarters in $4\frac{3}{4}$.

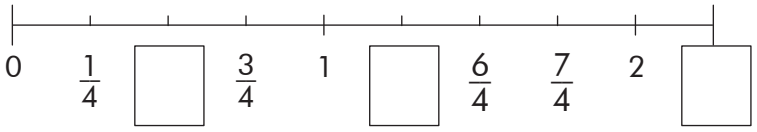
25. There are _____ sixths in $1\frac{5}{6}$.

26. There are _____ eighths in $9\frac{3}{8}$.

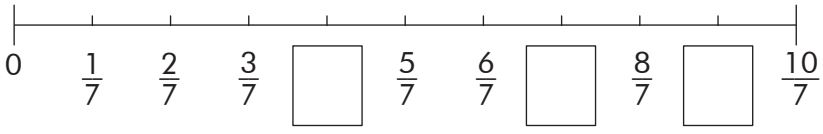
27. There are _____ tenths in $6\frac{7}{10}$.

For each number line, write the correct improper fraction in each box. Write each improper fraction in its simplest form.

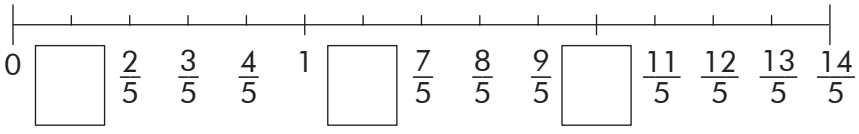
28.



29.



30.



Write each mixed number as an improper fraction.

31. $1\frac{1}{2} =$

32. $1\frac{3}{10} =$

33. $2\frac{3}{4} =$

34. $4\frac{3}{5} =$

35. $7\frac{1}{6} =$

36. $8\frac{2}{3} =$

37. $3\frac{5}{8} =$

38. $3\frac{7}{12} =$

39. $8\frac{4}{9} =$

40. $2\frac{4}{7} =$

Write each improper fraction as a mixed number.

41. $\frac{11}{2} =$

42. $\frac{9}{4} =$

43. $\frac{5}{5} =$

44. $\frac{16}{2} =$

45. $\frac{37}{5} =$

46. $\frac{12}{3} =$

47. $\frac{15}{8} =$

48. $\frac{17}{6} =$

49. $\frac{23}{6} =$

50. $\frac{38}{9} =$

Add these fractions. Write each answer in its simplest form.

51. $\frac{2}{5} + \frac{4}{5} =$

52. $\frac{2}{3} + \frac{4}{9} =$

53. $\frac{3}{7} + \frac{13}{14} =$

54. $\frac{5}{8} + \frac{3}{4} =$

55. $\frac{7}{12} + \frac{2}{6} + \frac{9}{12} =$

56. $\frac{1}{2} + \frac{3}{10} + \frac{9}{10} =$

57. $\frac{2}{4} + \frac{7}{8} + \frac{1}{4} =$

58. $\frac{1}{3} + \frac{3}{9} + \frac{5}{9} =$

Subtract these fractions. Write each answer in its simplest form.

59. $6 - \frac{2}{8} =$

60. $10 - \frac{5}{12} =$

61. $\frac{8}{9} - \frac{2}{9} =$

62. $\frac{9}{10} - \frac{1}{2} =$

63. $2\frac{6}{9} - \frac{1}{3} =$

64. $4\frac{9}{12} - \frac{2}{4} =$

65. $5\frac{7}{12} - \frac{1}{4} =$

66. $7 - \frac{9}{10} - \frac{2}{5} =$

Solve the problems below.

67. $\frac{2}{3}$ of 21 =

68. $\frac{1}{8}$ of 72 =

69. $\frac{5}{9}$ of 81 =

70. $\frac{4}{5}$ of 65 =

71. $\frac{9}{10}$ of 20 =

72. $\frac{5}{6} \times 48 =$

73. $\frac{3}{7} \times 63 =$

74. $\frac{3}{4} \times 52 =$

75. $\frac{4}{9} \times 27 =$

76. $\frac{1}{6} \times 84 =$

Solve the following story problems. Show your work in the space below.

77. Judi baked a cake. She gave $\frac{3}{8}$ of it to her neighbor. What fraction of the cake did she have left?

78. An empty can has a mass of $\frac{1}{6}$ lb. When it is filled with sand, it has a mass of $\frac{7}{12}$ lb. Find the mass of the sand in the can.

79. What is the total mass of three boxes if Box A has a mass of $\frac{5}{6}$ kg, Box B has a mass of $\frac{1}{10}$ kg, and Box C has a mass of $\frac{9}{10}$ kg?

80. After cutting a length of ribbon and giving $\frac{5}{12}$ m of ribbon to her daughter, Mrs. Kwan had $\frac{1}{4}$ m of ribbon left. If she had $\frac{11}{12}$ m of ribbon in the beginning, what was the length of ribbon Mrs. Kwan cut?

81. Maggie, Joyce, and Lina each prepared different amounts of fruit punch for a party. Maggie prepared $\frac{5}{9}$ L of fruit punch and Joyce prepared $\frac{1}{3}$ L of fruit punch. If they had prepared a total of $1\frac{2}{3}$ L of fruit punch, how much fruit punch did Lina prepare?

82. Eduardo drank $\frac{6}{10}$ L of milk. Viktor drank $\frac{1}{2}$ L of milk less than Eduardo. How much milk did the two children drink in all?

83. Mrs. Nguyen bought 5 L of cooking oil. She used $\frac{1}{4}$ L of cooking oil on Monday. She used $\frac{1}{8}$ L of cooking oil on Tuesday. How much cooking oil did she have left?

84. In a race, Carla ran $\frac{3}{4}$ km and swam $\frac{3}{8}$ km. She biked the rest of the race. If she traveled $12\frac{7}{8}$ km altogether, how far did she bike?

85. There are 16 red beads, 24 green beads, and 20 blue beads in a box. What fraction of the beads in the box are blue?

86. The distance from Town A to Town B is 18 miles. Luke starts his journey from Town A and travels $\frac{1}{6}$ of the total distance. How much further does he have to travel in order to reach Town B?

87. There were 32 chocolates in a box. After eating some chocolates, Tara found that she had $\frac{5}{8}$ of the chocolates left. How many chocolates did Tara eat?

88. Farmer Bill had 28 chickens, 15 ducks, and 7 turkeys. He sold $\frac{4}{5}$ of the birds.

(a) How many birds did he sell in all?

(b) If he sold 12 chickens, what fraction of the chickens were left?

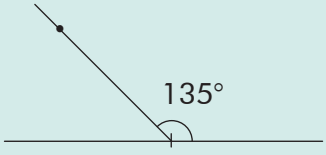
89. 568 people watched a concert. $\frac{5}{8}$ of the audience were women, while $\frac{1}{4}$ of them were men. How many children were there at the concert?

90. Isabel received a sum of money. She gave $\frac{1}{3}$ of the money to her brother. If she had $60 left, how much money did Isabel receive?

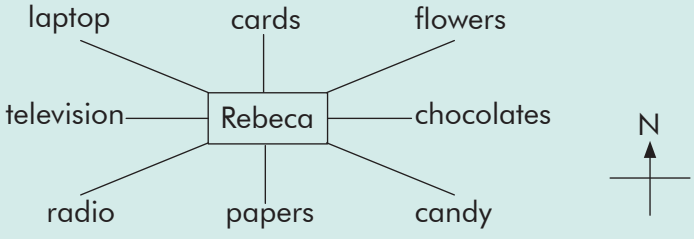
Unit 6: ANGLES

Examples:

1. Draw an angle equal to 135°.



2. Rebeca is playing a game. She stands in the middle of a room.



(a) Rebeca is facing northwest. What can she see?

laptop

(b) Rebeca is facing south. If she turns 90° counterclockwise, what will she see?

chocolates

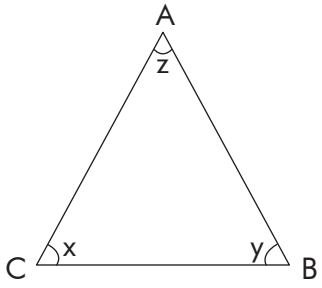
(c) Rebeca will see the flowers if she turns 180° clockwise. In which direction is Rebeca facing?

southwest

(d) Rebeca is looking at the papers. If she turns **315°** counterclockwise, she will see the radio.

Name the marked angles in another way.

1.

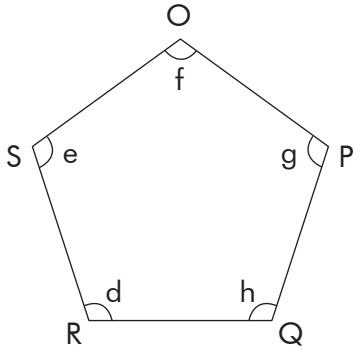


∠ABC = _____

∠ACB = _____

∠BAC = _____

2.



∠d = _____

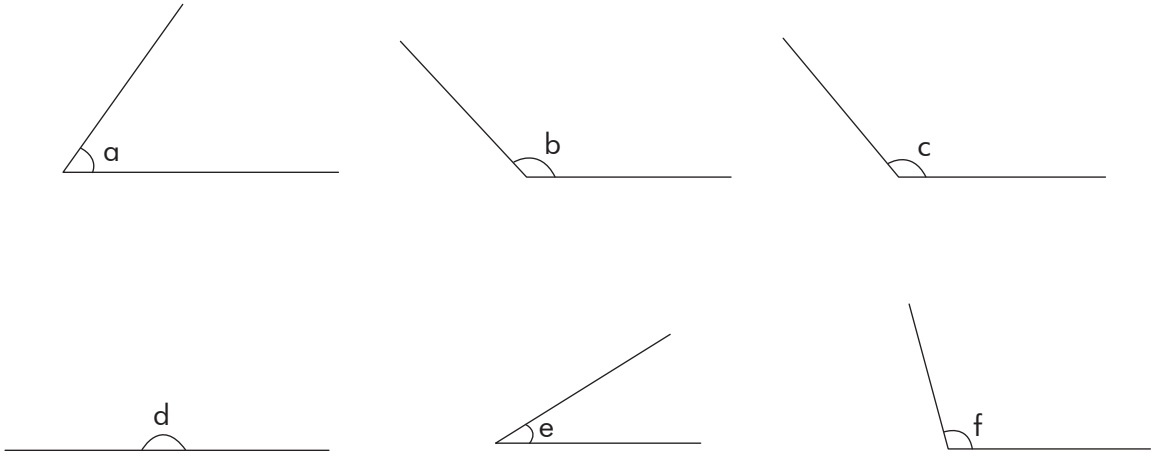
∠e = _____

∠f = _____

∠g = _____

∠h = _____

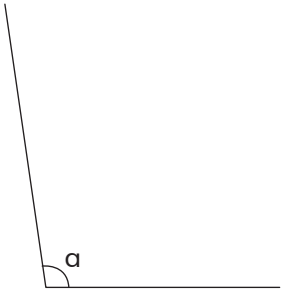
Study the following angles and answer questions 3 and 4.



3. Identify the angles that are greater than 90°. _____

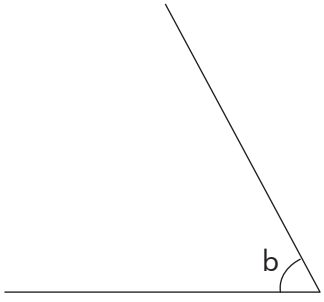
4. Identify the angles that are smaller than 90°. _____

Estimate and measure the marked angles with a protractor.

5. 

Estimated value: ∠a = _____°

Actual measurement: ∠a = _____°

6. 

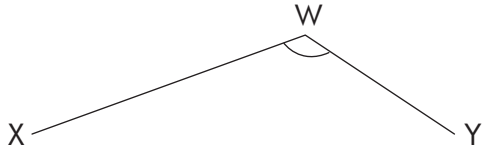
∠b = _____°

∠b = _____°

7. 

∠PQR = _____°

∠PQR = _____°

8. 

∠XWY = _____°

∠XWY = _____°

Draw the following angles in the space below.

9. $\angle p = 75°$

10. $\angle r = 108°$

11. $\angle q = 45°$

12. $\angle s = 134°$

Fill in each blank with the correct answer.

13. A _____-turn equals 1 right angle.

14. A half-turn equals _____°.

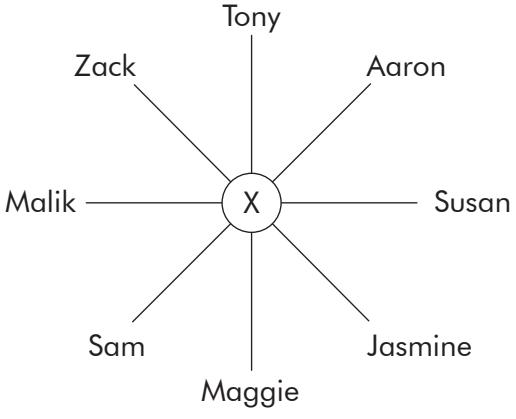
15. A _____-turn equals 270°.

16. A complete turn equals _____ right angles.

17. _____ of a complete turn is 180°.

18. _____ of a complete turn is 90°.

19. Which direction is each child from X?



Tony: _____

Aaron: _____

Susan: _____

Jasmine: _____

Maggie: _____

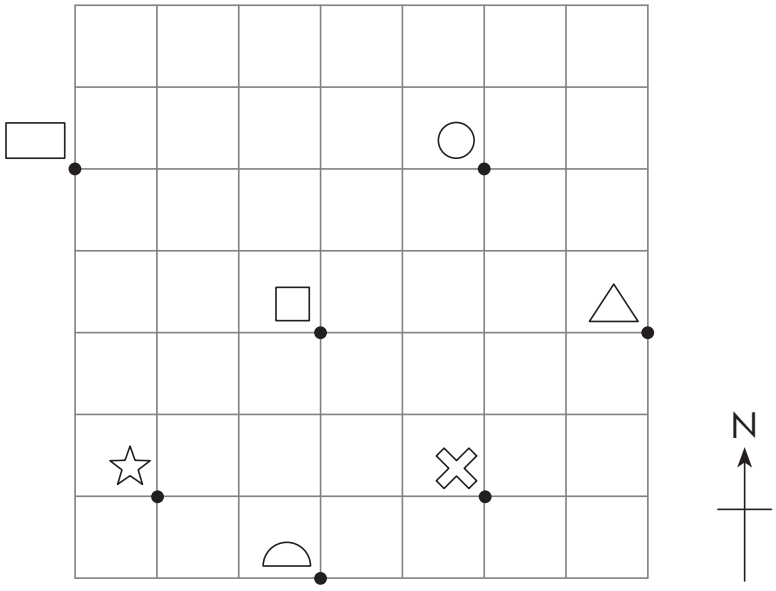
Sam: _____

Malik: _____

Zack: _____

Look at each picture carefully and fill in each blank with the correct answer.

20.



(a) The circle is _____ of the triangle.

(b) The semicircle is _____ of the star.

(c) The square is _____ of the triangle.

(d) The cross is _____ of the star.

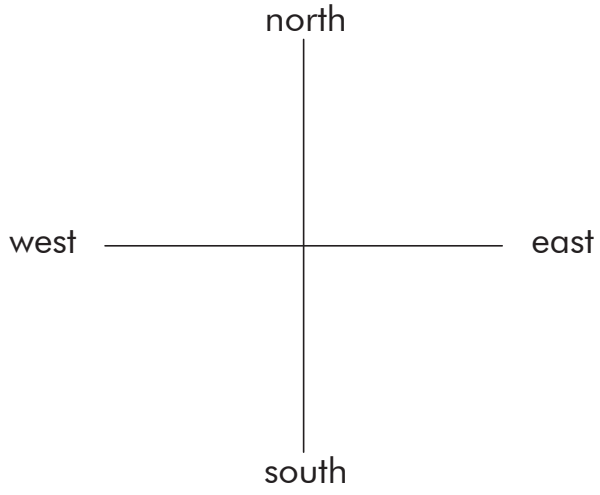
(e) The square is _____ of the semicircle.

(f) The circle is _____ of the rectangle.

(g) The triangle is _____ of the cross.

(h) The star is _____ of the circle.

21.



(a) George is facing north. If he turns clockwise _____°, he will face southwest.

(b) George is facing west. If he turns counterclockwise _____°, he will face east.

(c) George is facing northwest. If he turns counterclockwise _____°, he will face northeast.

(d) George is facing south. If he turns counterclockwise _____° , he will face southeast.

(e) George is facing east. If he makes a _____-turn clockwise, he will face south.

(f) George is facing north. If he makes a _____-turn counterclockwise, he will face east.

REVIEW 3

Choose the correct answer. Write its number in the parentheses.

1. Express $6\frac{7}{9}$ as an improper fraction.

   (1) $\frac{22}{9}$ (3) $\frac{61}{9}$

   (2) $\frac{54}{9}$ (4) $\frac{67}{9}$ ( )

2. What is the difference between $\frac{2}{5}$ and $\frac{3}{10}$?

   (1) $\frac{3}{5}$ (3) $\frac{1}{5}$

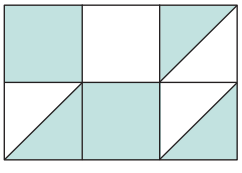
   (2) $\frac{1}{2}$ (4) $\frac{1}{10}$ ( )

3. $\frac{4}{9} + \frac{2}{3} =$ _____

   (1) $\frac{2}{3}$ (3) $\frac{6}{9}$

   (2) $\frac{2}{9}$ (4) $1\frac{1}{9}$ ( )

4. What fraction of the figure below is shaded?



   (1) $\frac{1}{3}$ (3) $\frac{1}{2}$

   (2) $\frac{5}{12}$ (4) $\frac{7}{12}$ ( )

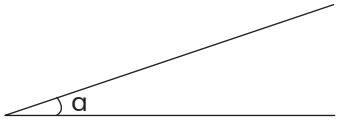
5. $\frac{2}{7}$ of 98 = _____

(1) 28
(2) 49
(3) 196
(4) 343
( )

6. How many sixths are there in $5\frac{1}{6}$?

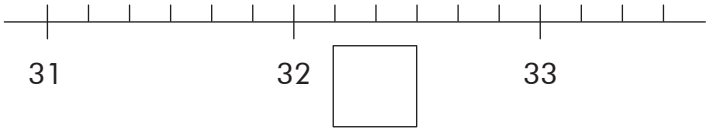
(1) 3
(2) 12
(3) 31
(4) 57
( )

7. Measure ∠a.



(1) 10°
(2) 15°
(3) 18°
(4) 20°
( )

Write your answers on the lines.

8. 

What is the missing fraction in the box? Write your answer in its simplest form.

_____

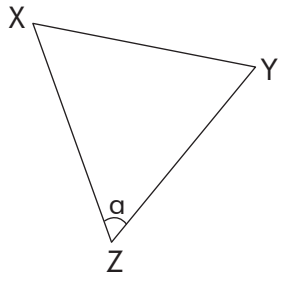
9. Write $\frac{24}{5}$ as a mixed number in its simplest form. _____

10. ☐ of a complete turn is 270°. _____

11. Mrs. Diaz baked a cake. She gave $\frac{1}{2}$ of the cake to her sister and her children ate $\frac{3}{8}$ of the cake. How much cake did she have left?

_____

12. Name the angle marked a in another way.

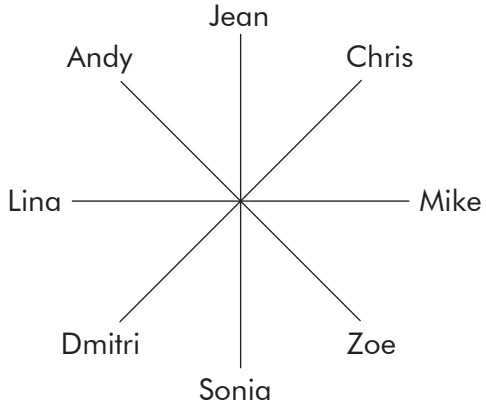


_____

13. Mr. Yang bought 25 bottles of milk. If each bottle contained $\frac{3}{4}$ L of milk, how much milk did Mr. Yang buy?

_____

14. Eight children are standing in different positions shown below. Identify the person who is standing in the northwest.



_____

15. Giselle is facing south. If she makes a ☐ ° turn in the counterclockwise direction, she will face northeast.

_____

Solve the following story problems. Show your work in the space below.

16. There were 32 children at a party. There were 8 more boys than girls. If 8 girls wore glasses, what fraction of the girls wore glasses at the party?

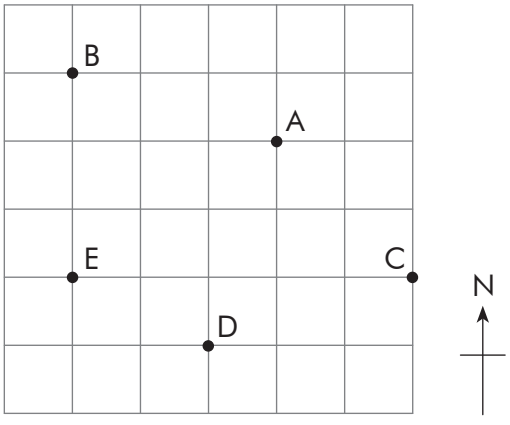
17. There were 104 people at a museum. $\frac{3}{8}$ of the people were women. If there were 28 children at the museum, how many men were there?

18. Ana had some money. She used $\frac{4}{7}$ of it to buy a pair of shoes which cost $96. If she spent another $\frac{2}{7}$ of the money to buy a dress, how much did she spend altogether?

19. Draw an angle of 168° and label it as x.

Look at the picture and fill in each blank with the correct answer.

20.



(a) Letter A is _____ of letter B.

(b) Letter B is _____ of letter E.

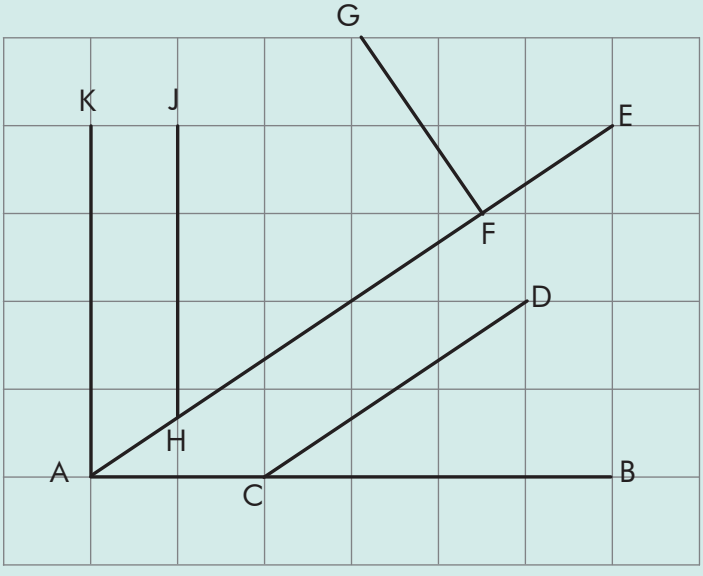
(c) Letter C is _____ of letter D.

(d) Letter E is _____ of letter D.

(e) Letter E is _____ of letter C.

Unit 7: PERPENDICULAR AND PARALLEL LINES

Examples:



1. Identify all the perpendicular lines.

   KA ⊥ AB and GF ⊥ HE

2. Identify all the parallel lines.

   HE // CD and KA // JH

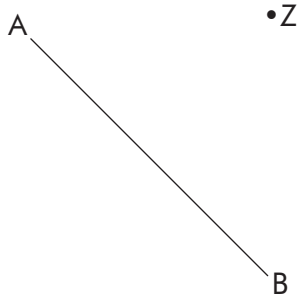
3. Identify all vertical lines.

   KA and JH

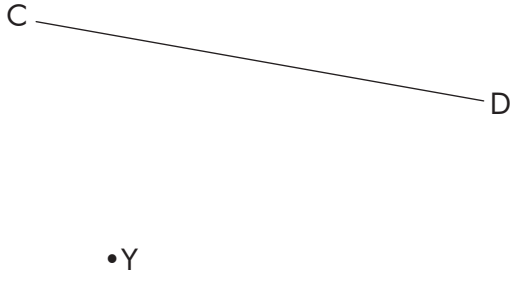
4. Identify all horizontal lines.

   AB

1. Draw a line perpendicular to the line AB through the point Z.

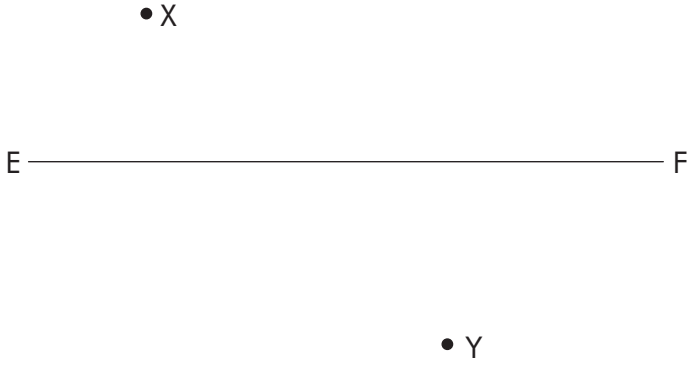


2. Draw a line perpendicular to the line CD through the point Y.



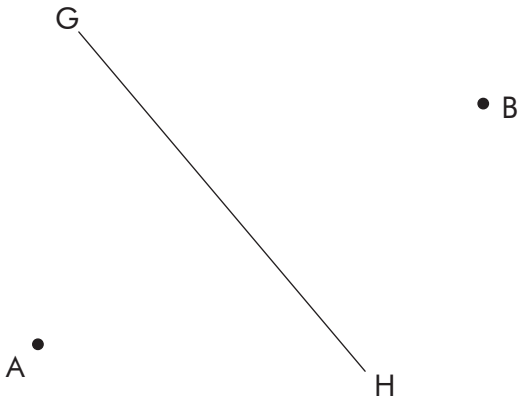
3. (a) Draw a line perpendicular to the line EF through the point X.

   (b) Draw a line perpendicular to the line EF through the point Y.

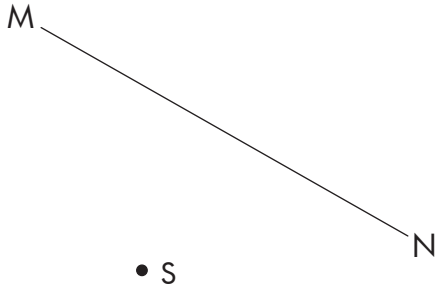


4. (a) Draw a line perpendicular to line GH through the point A.

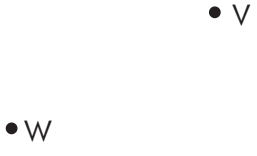
   (b) Draw a line perpendicular to line GH through the point B.



5. Draw a line parallel to MN through the point S.

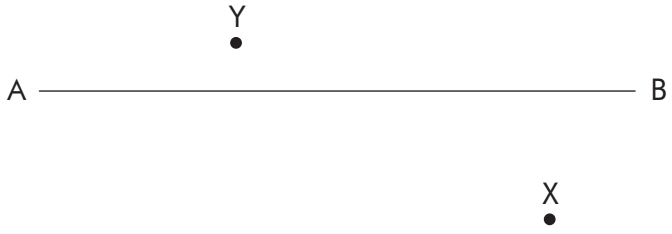


6. Draw a pair of parallel lines through the points V and W.

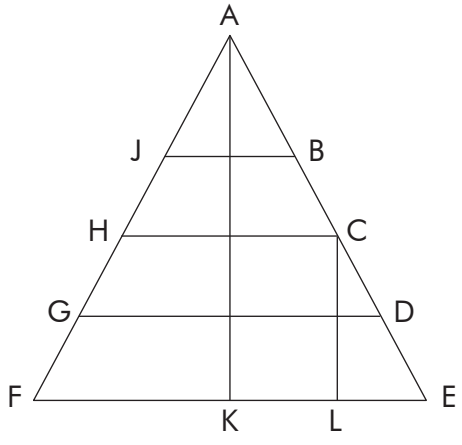


7. (a) Draw a line parallel to AB through the point X.

(b) Draw a line parallel to AB through the point Y.



8.



(a) Identify all pairs of parallel lines in the figure above.

_____

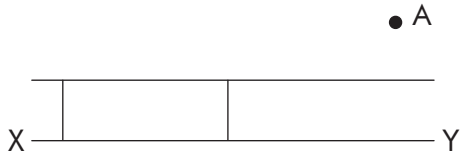
(b) Identify all pairs of perpendicular lines in the figure above.

_____

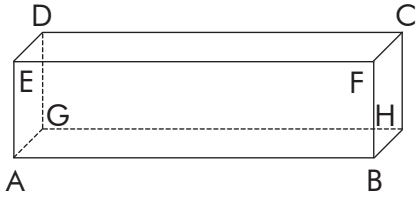
9. The figure below shows a section of a brick wall.

(a) Draw a vertical line through A to meet XY and label it as AB.

(b) Draw a horizontal line through A and label it as AC.



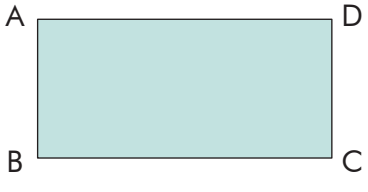
10. The figure below shows a rectangular fish tank.



(a) Identify all the horizontal lines. _____

(b) Identify all the vertical lines. _____

11. The figure on the right shows a box.



(a) Line AB is a _____ line.

(b) Line BC is a _____ line.

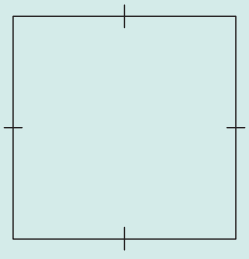
(c) Line DC is a _____ line.

(d) Line AD is a _____ line.

Unit 8: RECTANGLES AND SQUARES

Examples:

1. Is this figure a rectangle or a square? List one property.



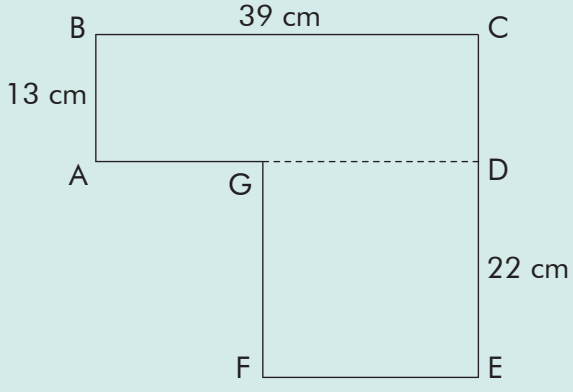
This figure is a square.

It has four sides. / All four sides are equal. / It has two pairs of parallel lines. / All four angles are right angles.

2. The figure below is made up of a rectangle and a square.

   (a) Find the length of AG.

   (b) Find the length of CE.

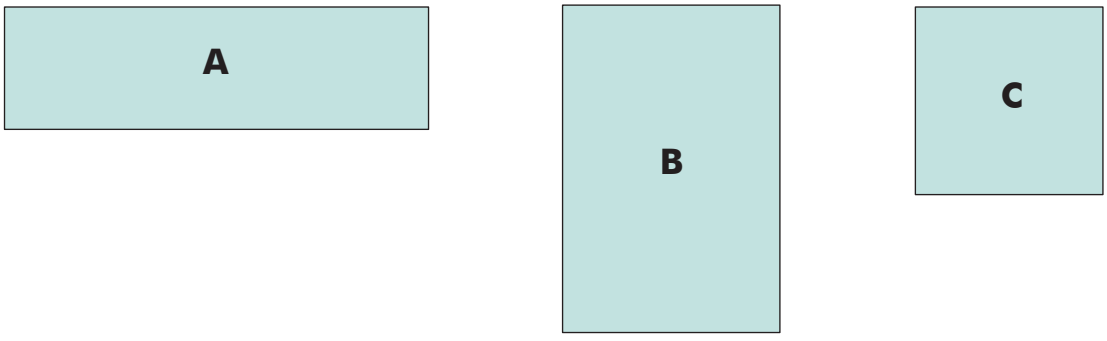


(a) FE = 22 cm

AG = 39 – 22 = **17 cm**

(b) CE = 13 + 22 = **35 cm**

Look at the figures below.



1. (a) Is Figure A a rectangle or a square? _____

   (b) State two properties of Figure A.

   _____

   _____

2. (a) Is Figure B a rectangle or a square? _____

   (b) State two properties of Figure B.

   _____

   _____

3. (a) Is Figure C a rectangle or a square? _____

   (b) State two properties of Figure C.

   _____

   _____

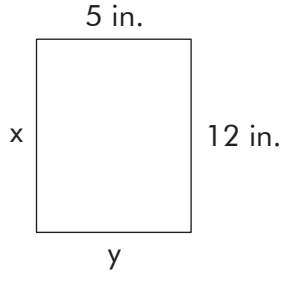
4. Draw Figure X in the box based on the given hints.

- It has four equal sides.
- It has two pairs of parallel lines.
- It has four right angles.

5. Draw Figure Z in the box based on the given hints.

- It has four sides.
- It has two pairs of parallel lines.
- It has equal opposite sides.

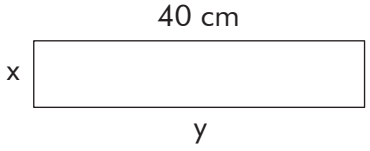
6. Find the unknown sides.



x = _____ in.

y = _____ in.

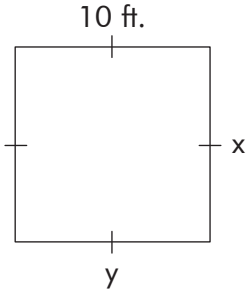
7. If the length of the figure below is five times its width, find the unknown sides.



x = _____ cm

y = _____ cm

8. Find the unknown sides.



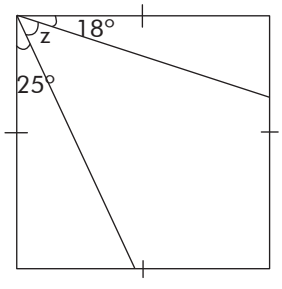
x = _____ ft.

y = _____ ft.

9. The figure below is not drawn to scale. Find the unknown marked angle.

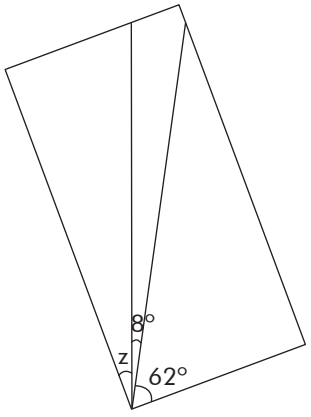
$\angle z$ = _____°

10. The figure below is not drawn to scale. Find the unknown marked angle.



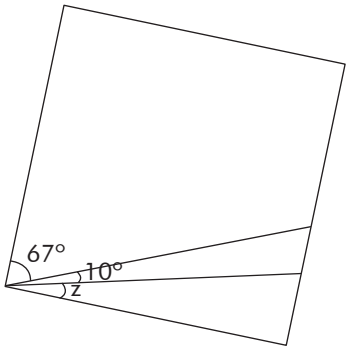
$\angle z$ = _____°

11. The figure below is not drawn to scale. Find the unknown marked angle.



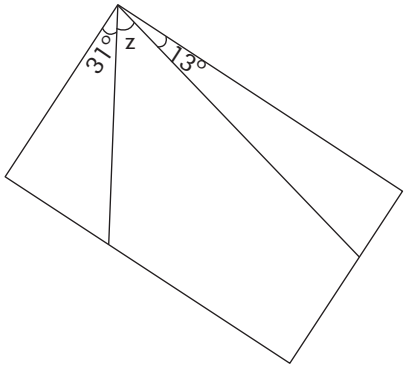
$\angle z =$ _____°

12. The figure below is not drawn to scale. Find the unknown marked angle.



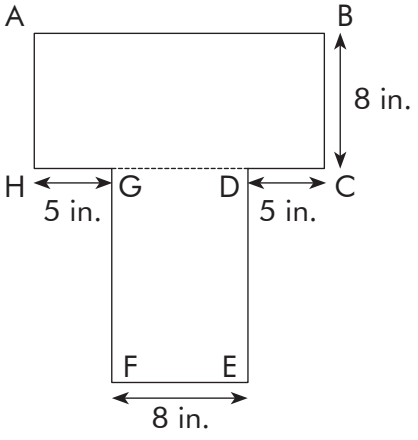
$\angle z =$ _____°

13. The figure below is not drawn to scale. Find the unknown marked angle.

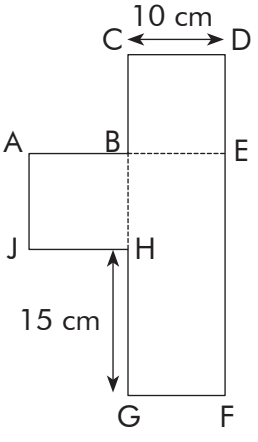


$\angle z =$ _____°

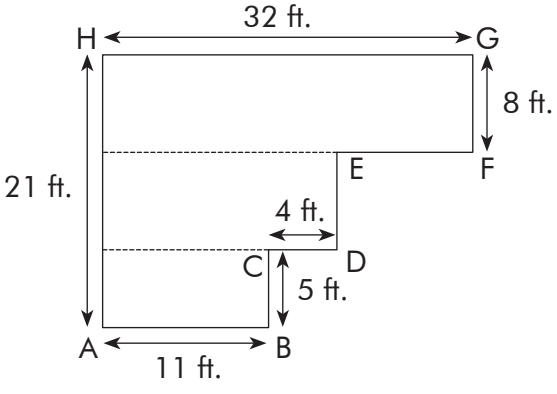
14. The figure below is made up of two rectangles. Find AB and AH.



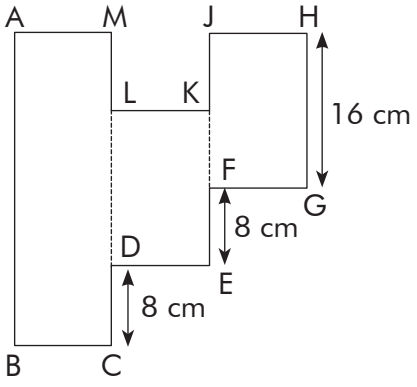
15. The figure below is made up of two identical squares and a rectangle. Find DF and EF.



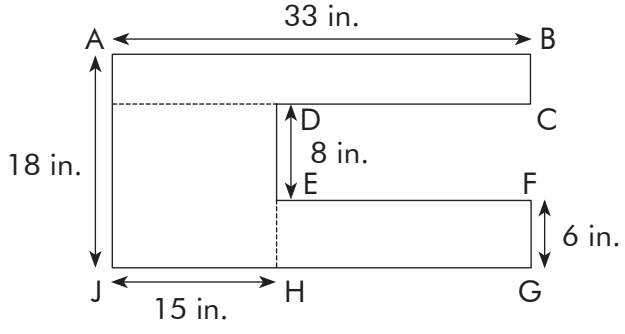
16. The figure below is made up of three rectangles. Find EF and DE.



17. The figure below is made up of a big rectangle and two small identical rectangles. Find ML and AB.



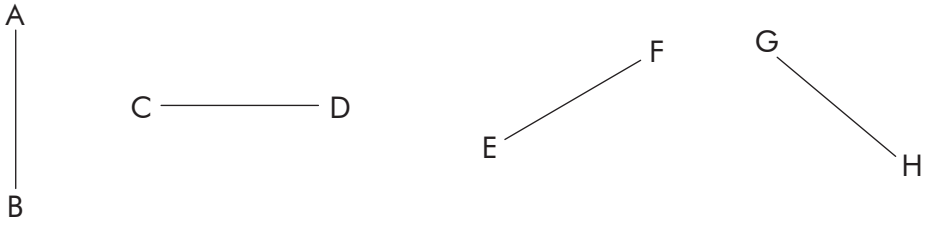
18. The figure below is made up of two rectangles and a square. Find BC and EF.



REVIEW 4

Choose the correct answer. Write its number in the parentheses.

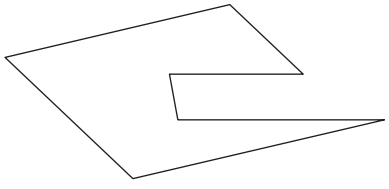
1. Which of the following lines shows a vertical line?



(1) Line AB
(2) Line CD
(3) Line EF
(4) Line GH

( )

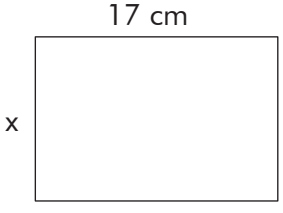
2. How many pairs of parallel lines are there in the figure below?



(1) 2
(2) 3
(3) 4
(4) 5

( )

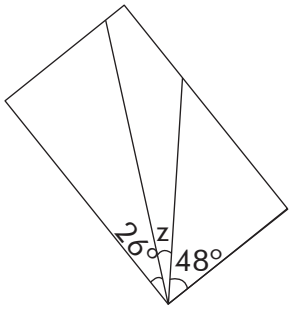
3. The figure below shows a rectangle. If the length of the rectangle is 3 cm more than its width, find x.



(1) 14 cm
(2) 15 cm
(3) 18 cm
(4) 20 cm

( )

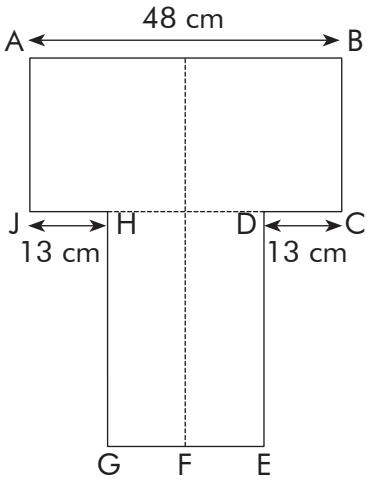
4. The figure below is not drawn to scale. Find the unknown marked angle in the figure below.



(1) 16°
(2) 42°
(3) 64°
(4) 106°

( )

The figure below is made up of two identical squares and two identical rectangles. Use this figure to answer questions 5 and 6.



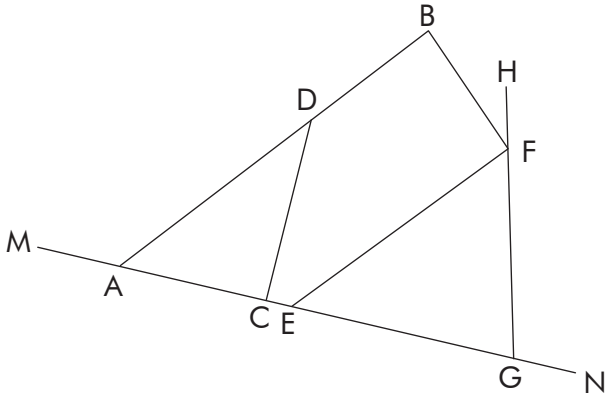
5. Find the length of AJ.

(1) 12 cm
(2) 22 cm
(3) 24 cm
(4) 35 cm
( )

6. Find the length of FE.

(1) 35 cm
(2) 22 cm
(3) 11 cm
(4) 10 cm
( )

For questions 7 and 8, refer to the figure below.



7. Which line is perpendicular to MN?

(1) BA
(2) DC
(3) FE
(4) HG
( )

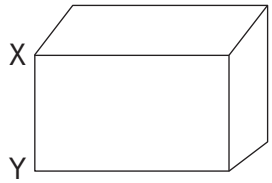
8. Which line is parallel to AB?

(1) BF
(2) CD
(3) EF
(4) GH

( )

9. How many lines are parallel to Line XY in the figure below?

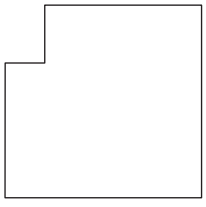
(1) 2
(2) 3
(3) 4
(4) 5



( )

10. How many horizontal lines are there in the figure below?

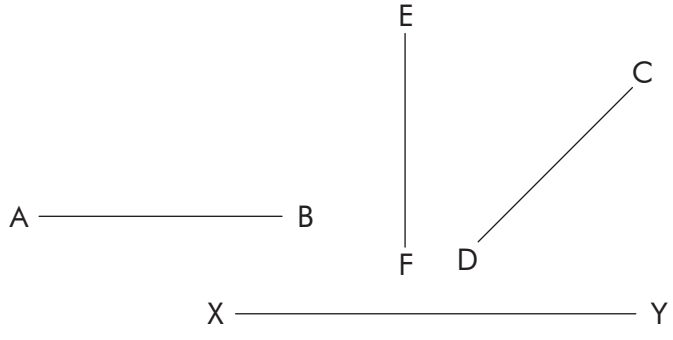
(1) 2
(2) 3
(3) 4
(4) 6



( )

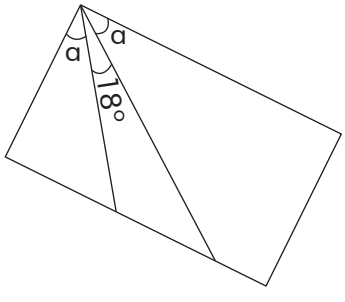
Write your answers on the lines.

11. Identify a line perpendicular to line XY.



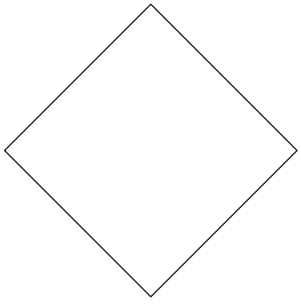
_____

12. The figure below is not drawn to scale. Find the unknown marked angle.



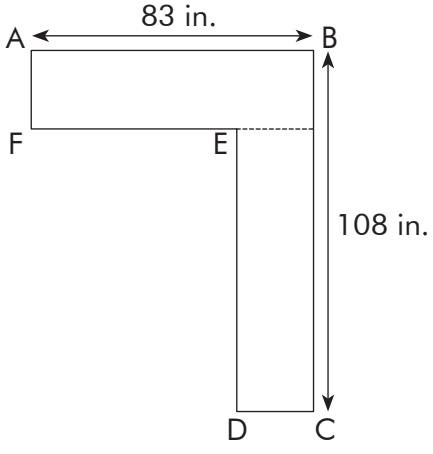
_____

13. State one property of the figure shown below.



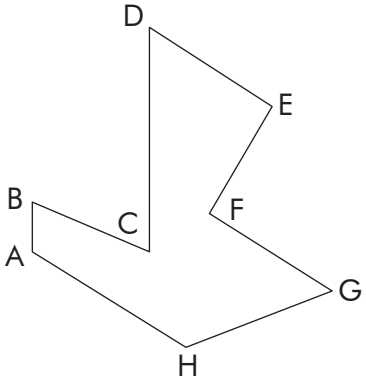
_____

14. The figure below is made up of two identical rectangles. Find line AF.



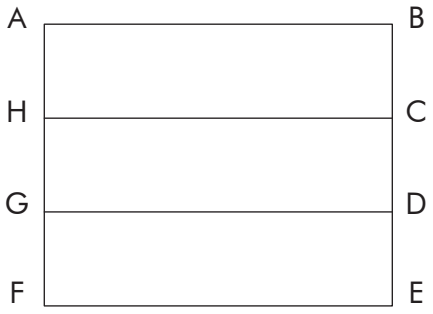
_____

15. Identify two parallel lines in the figure shown below.



_____

Use the following figure to answer questions 16 and 17.



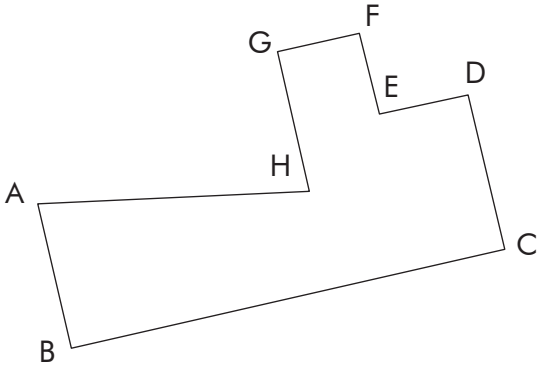
16. (a) AF and BE are _____ lines.

(b) AB and FE are _____ lines.

17. (a) What type of line is GD? _____

(b) What type of line is BC? _____

18.

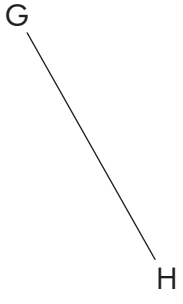


The line perpendicular to line DC in the above figure is line _____.

19. Draw a figure based on the given hints.

- It has two pairs of parallel lines.
- It has four sides.

20. Draw a line that is parallel to GH.



MID-REVIEW

Choose the correct answer. Write its number in the parentheses.

1. 1,500 more than 86,576 is _____.

   (1) 85,026 (3) 87,581

   (2) 85,076 (4) 88,076 ( )

2. The digit 0 in 13,095 is in the _____ place.

   (1) ten thousands (3) hundreds

   (2) thousands (4) tens ( )

3. Forty-five thousand, forty written in numeral is _____.

   (1) 45,014 (3) 45,140

   (2) 45,040 (4) 45,400 ( )

4. Which of the following is **not** a factor of 66?

   (1) 2 (3) 8

   (2) 3 (4) 11 ( )

5. Which of the following is 9,000 when rounded to the nearest ten?

   (1) 8,990 (3) 9,004

   (2) 8,994 (4) 9,009 ( )

6. $3\frac{2}{5} = \frac{\square}{5}$. The missing number in the box is _____.

   (1) 7 (3) 15

   (2) 10 (4) 17 ( )

7. $3{,}904 \times 8 =$ _____

(1) 30,232 (3) 31,520

(2) 31,232 (4) 32,520 ( )

8. How many quarters are there in $5\frac{3}{4}$?

(1) 15 (3) 20

(2) 19 (4) 23 ( )

9. A movie theater sold 1,659 tickets on Thursday and three times as many tickets on Friday. How many tickets did it sell on both days?

(1) 3,318 (3) 6,636

(2) 4,977 (4) 8,295 ( )

10. Anya spent $40 and had $10 left. What fraction of her money did she spend?

(1) $\frac{1}{5}$ (3) $\frac{3}{4}$

(2) $\frac{1}{4}$ (4) $\frac{4}{5}$ ( )

The following table shows Lily's grades in four subjects. Study it carefully and answer questions 11 and 12.

Subject	English	Math	Science	Social studies
Grade	75	90	63	81

11. What was the total score for Lily's best three subjects?

(1) 219 (3) 234

(2) 228 (4) 246 ( )

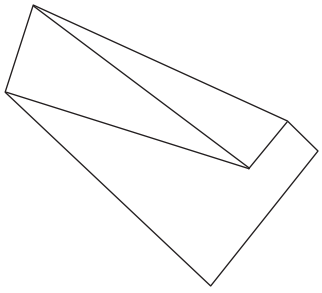
12. What was the difference between the highest and the lowest scores?

(1) 9 (3) 18

(2) 15 (4) 27 ( )

13. How many pair(s) of perpendicular lines are in the figure below?

(1) 1
(2) 2
(3) 3
(4) 4



( )

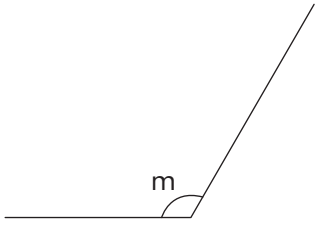
14. Charlotte is facing north. If she turns counterclockwise 225°, she will be facing _____.

(1) northeast
(2) southeast
(3) northwest
(4) southwest

( )

15. Find ∠m with the use of a protractor.

(1) 55°
(2) 60°
(3) 115°
(4) 120°



( )

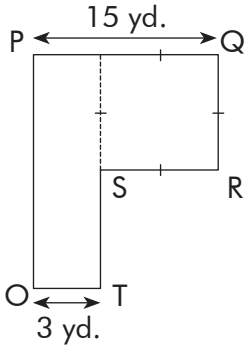
16. Which of the following is the third multiple of 8?

(1) 16
(2) 24
(3) 26
(4) 28

( )

17. The figure below is made up of a rectangle and a square. Find QR.

(1) 10 yd.
(2) 12 yd.
(3) 15 yd.
(4) 18 yd.



( )

18. 14 thousands more than 58,750 is _____.

(1) 44,750 (3) 58,764

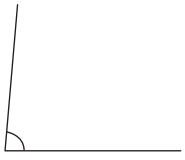
(2) 58,736 (4) 72,750 ( )

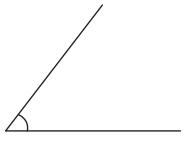
19. 1,489 ÷ 8 = _____ R _____

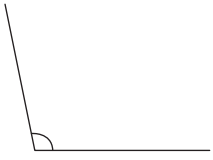
(1) 185, 1 (3) 186, 1

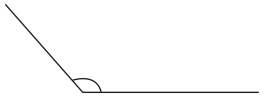
(2) 185, 6 (4) 186, 5 ( )

20. Which of the following shows an angle of 85°?

(1) 

(3) 

(2) 

(4) 

( )

Write your answers on the lines.

21. 2 ten thousands + 5 thousands + 31 hundreds + 6 tens + 4 ones = ☐

Write the correct answer in numeral form.

_____

22. Complete the number pattern.

35,070, ☐, 35,230, 35,310, 35,390 _____

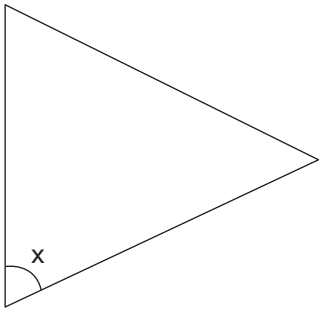
23. 180° = ☐ –turn _____

24. Find the product of 532 and 37. _____

25. 21 and 42 are the first two common multiples of ☐ and ☐. _____

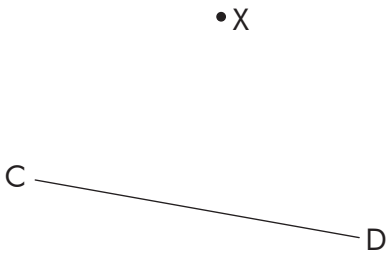
26. Write $\frac{58}{6}$ as a mixed number in its simplest form. _____

27. Measure ∠x.

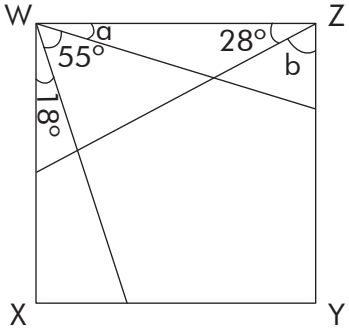


_____

28. Draw a line perpendicular to CD through the point X.



29. WXYZ is a square. It is not drawn to scale. Find ∠a and ∠b.



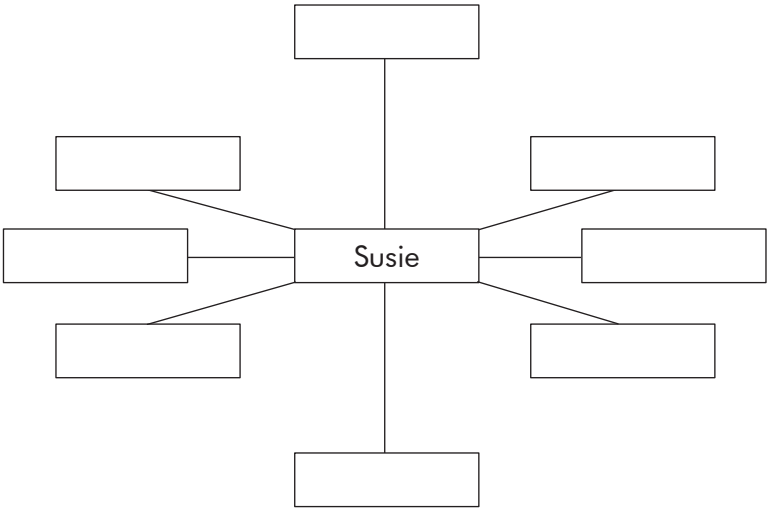
∠a = _____

∠b = _____

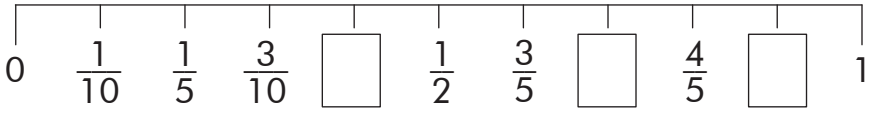
30. Find the value of $3 + \frac{2}{5} + \frac{9}{10}$. _____

31. Based on the given hints, write 'Nicholas' and 'Zoe' in the correct boxes.

- Nicholas is standing north of Susie.
- Zoe is standing southwest of Susie.



32. Fill in each box with the correct answer.



For questions 33 and 34, study the table below. It shows the number of pots of flowers sold by a florist during a five-day fair.

Monday	𝍸 𝍸 𝍸 |
Tuesday	𝍸 𝍸 ||
Wednesday	𝍸 𝍸 𝍸 |||
Thursday	𝍸 𝍸 𝍸 𝍸
Friday	𝍸 𝍸 𝍸 𝍸 ||||

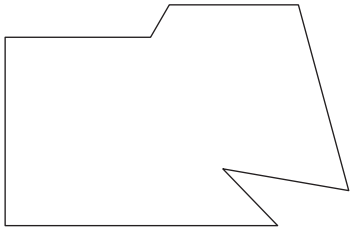
33. Use the data from the previous table to complete the following table.

Day	Number of pots of flowers
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

34. How many pots of flowers did the florist sell in all? _____

35. Estimate the value of 421 ÷ 8. _____

36. How many right angles are there in the figure below?



_____

37. When a number is divided by 7, it has a quotient of 26 and a remainder of 5. What is the number?

_____

38. Mrs. Takashi bought 12 lb. of flour. She used $\frac{5}{6}$ of it to bake some pies. How much flour does she have left?

_____

39. 9,055 × 7 ≈ ☐ _____

40. Draw an angle measuring 270°.

Solve the following story problems. Show your work in the space below.

41. Mr. Fay saved $630 a month for eight months. He then bought a television set and a stereo. After paying $295 for the stereo, he had $1,853 left. What was the cost of the television set?

42. A soccer ball costs $15 more than a book. A remote-controlled car costs $198 more than the soccer ball. If the remote-controlled car costs $230, what is the cost of the book?

43. Alex, Juan, and Cindy shared a pizza. Alex ate $\frac{1}{4}$ of it. Brandon ate $\frac{1}{8}$ of the pizza more than Alex, and Cindy ate the rest of the pizza. What fraction of the pizza did Cindy eat?

44. Esther had 56 stickers. She gave $\frac{3}{8}$ of them to her sister. She gave some stickers to her friend. If she had 18 stickers left, how many stickers did she give to her friend?

45. Mr. Popovic is 76 years old and his granddaughter is 12 years old this year. In how many years will Mr. Popovic be five times as old as his granddaughter?

CHALLENGE QUESTIONS

Solve the following questions on another sheet of paper.

1. The number of eggs sold by Mrs. Bowles was observed in the pattern shown below.

   Fill in each box with the correct answer.

Day	1	2	3	4	5	6	7	8
Number of eggs sold	15	25		48	61		90	

2. Shani is four times as old as Jenny. Jenny is 3 years older than Enrique. If their total age is 57, how old will Jenny be in four years?

3. When I divide Number A by Number B, the answer is $6\frac{1}{4}$. If Number A is less than 30 and Number B is less than 10, what are numbers A and B?

4. I am a 5-digit number. My first digit is 2 more than the last digit but 2 less than my second digit. My second digit is the third multiple of 3, while my fourth digit is the second multiple of 3. My third digit is the difference between my second and fourth digits. What number am I?

5. The product of numbers X and Y is 600. The sum of the two numbers is 50. What are numbers X and Y?

6. Chet scored six times higher than Hugo on an English test. Jason's score on the same test was the sixth multiple of 10. If the three boys scored a total of 172, what was Chet's score on the test?

7. The difference of two numbers is 132. When one of the numbers is divided by the other, the quotient is 12. What are the two numbers?

8. Mieke wants to buy a bag. She saves $2 the first week. She saves $4 the second week. She saves $6 the third week and so on. In order to buy the bag, she needs to save for 8 weeks at this pattern. How much does the bag cost?

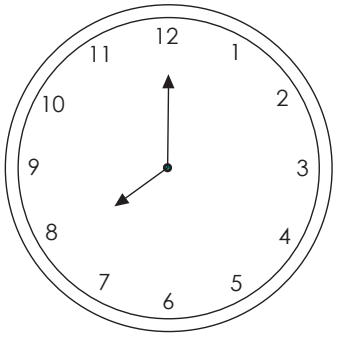
9. I am a 4-digit number. All my digits are factors of 8. The product of the first and last digits is the fourth multiple of 8. The second digit is 3 less than the last digit. If the first digit is the largest number, what number am I?

10. Place the first six multiples of 6 in each box so that the sum of each row is equal to the 10th and 11th multiples of 6.

			10th multiple of 6
			11th multiple of 6

11. Mr. Garza earns twice as much as his wife. Mrs. Garza earns twice as much as her sister. If Mrs. Garza's sister earns $1,255 a month, how much do the three of them earn in a year?

12. The clock below shows the time Sylvia wakes up in the morning. When the minute hand turns 150°, Sylvia eats her breakfast. At what time does Sylvia eat her breakfast?



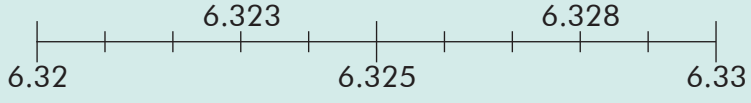
Unit 9: DECIMALS (PART 1)

Examples:

1. Change $8\frac{37}{100}$ to a decimal.

   $8\frac{37}{100}$ = 8 ones 37 hundredths = **8.37**

2. What number is 0.005 more than 6.323? **6.328**



3. Arrange the decimals in order, beginning with the largest.

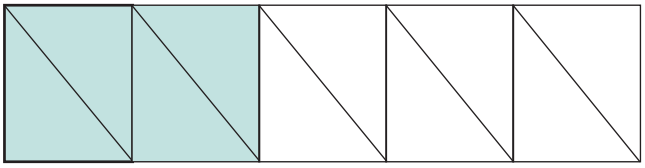
   0.708 0.078 0.78

   0.78, 0.708, 0.078

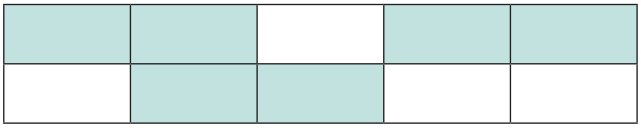
4. Round 28.69 to the nearest tenth.

   28.69 ≈ **28.7**

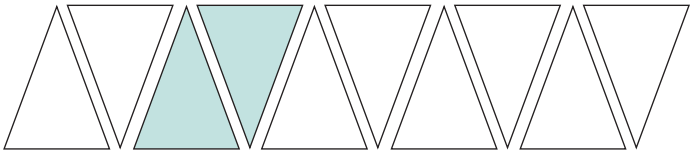
The shaded parts represent the decimals. Write the correct decimals on the lines provided.

1. 

_____

2. 

_____

3. 

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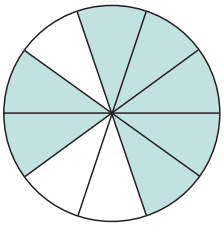
4. 

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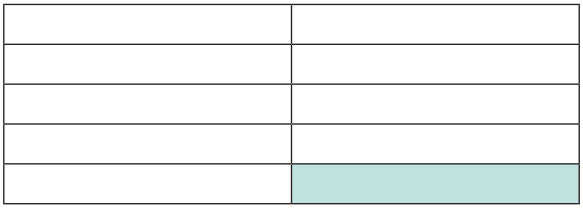
5. 

_____

Write the following in decimals.

6. 7 tenths = _____

7. 3 ones 2 tenths = _____

8. 4 ones 13 tenths = _____

9. 2 ones 18 tenths = _____

10. 9 ones 24 tenths = _____

Write each decimal in tenths.

11. 0.9 = _____ tenths

12. 3.6 = _____ tenths

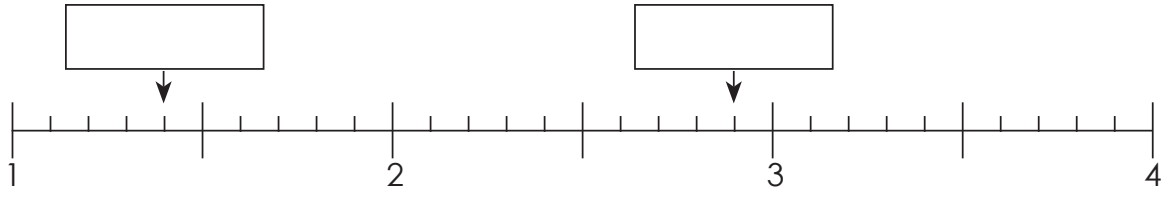
13. 78.4 = _____ tenths

14. 18.3 = _____ tenths

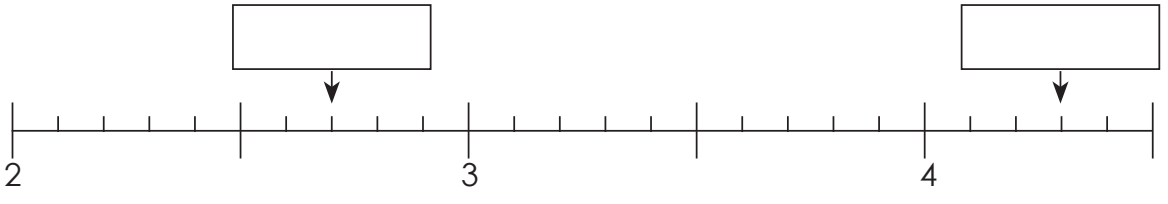
15. 21.5 = _____ tenths

For each number line, fill in each box with the correct decimal.

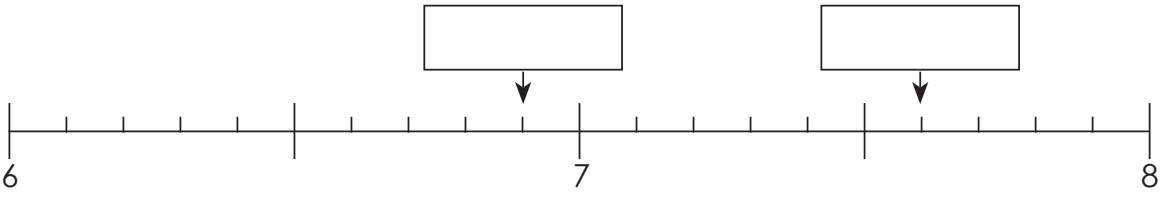
16.



17.



18.



Fill in each blank with the correct answer.

19. 9.1 = _____ ones 1 tenth

20. 42.6 = _____ tens 2 ones 6 tenths

21. 17.3 = 1 ten 7 ones _____ tenths

22. 69.5 = _____ tens 9 ones 5 tenths

23. 82.8 = 8 tens 2 ones _____ tenths

24. In 91.3,

    (a) the digit _____ is in the ones place.

    (b) the digit 3 is in the _____ place.

    (c) the value of the digit 9 is _____.

    (d) the digit 1 stands for _____.

25. In 57.6,

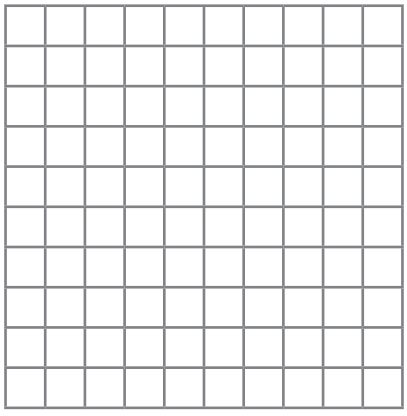
    (a) the digit _____ is in the tens place.

    (b) the digit 6 is in the _____ place.

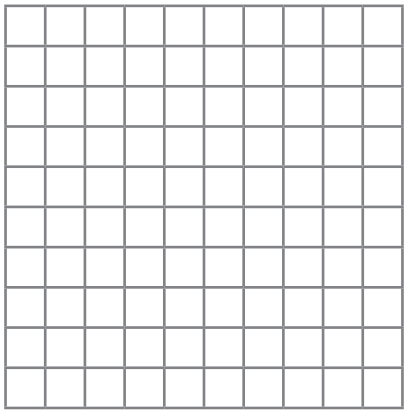
    (c) the value of the digit 7 is _____.

    (d) the digit 5 stands for _____.

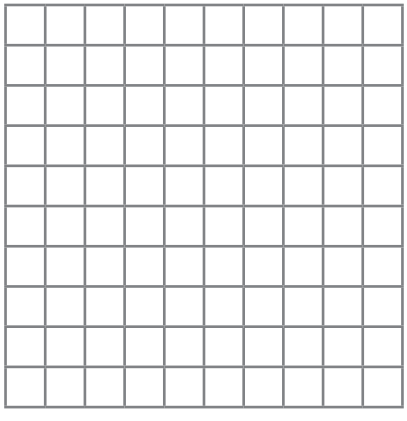
For each question, shade the boxes accordingly to show the correct decimal.

26. 

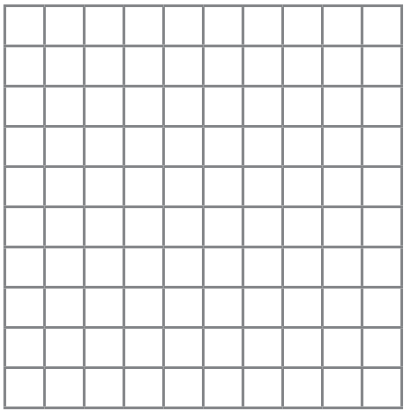
0.26

27. 

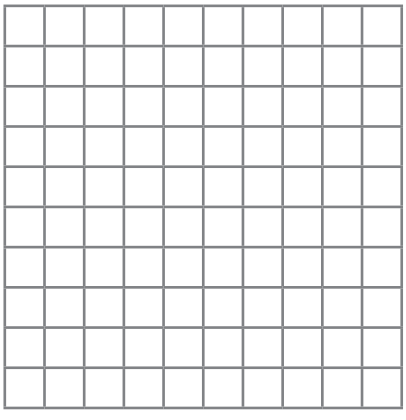
0.74

28. 

0.03

29. 

0.62

30. 

0.45

Write the following in decimals.

31. 8 hundredths = _____

32. 16 hundredths = _____

33. 32 hundredths = _____

34. 188 hundredths = _____

35. 311 hundredths = _____

Write each decimal in hundredths.

36. 5.43 = _____ hundredths

37. 81.95 = _____ hundredths

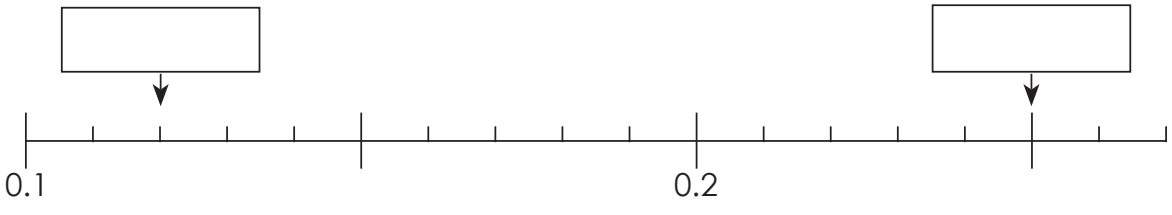
38. 60.72 = _____ hundredths

39. 38.54 = _____ hundredths

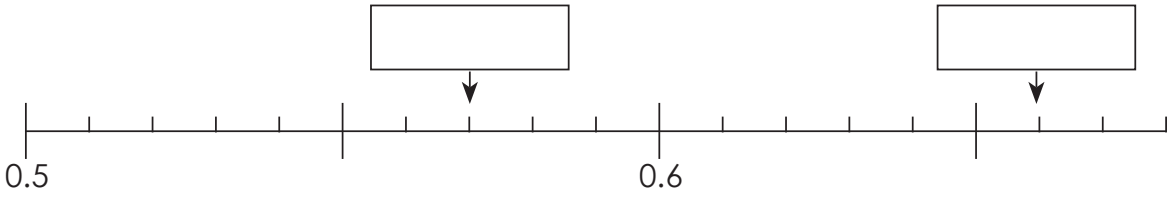
40. 90.45 = _____ hundredths

For each number line, fill in each box with the correct decimal.

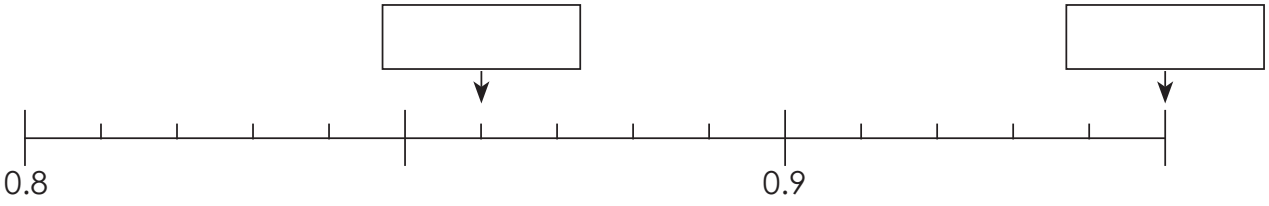
41.



42.



43.



Fill in each blank with the correct answer.

44. 20.45 = ____ tens ____ ones ____ tenths ____ hundredths

45. 71.38 = ____ tens ____ one ____ tenths ____ hundredths

46. 94.28 = ____ tens ____ ones ____ tenths ____ hundredths

47. 64.13 = ____ tens ____ ones ____ tenth ____ hundredths

48. 52.56 = ____ tens ____ ones ____ tenths ____ hundredths

49. In 70.24,

    (a) the digit _____ is in the ones place.

    (b) the digit 7 is in the _____ place.

    (c) the digit 2 stands for _____.

    (d) the value of the digit 4 is _____.

    (e) the value of the digit 7 is _____.

50. In 93.18,

    (a) the digit _____ is in the tenths place.

    (b) the digit 9 is in the _____ place.

(c) the digit 3 stands for _____.

(d) the value of the digit 8 is _____.

(e) the value of the digit 1 is _____.

Write the following in decimals.

51. 4 thousandths = _____

52. 15 thousandths = _____

53. 291 thousandths = _____

54. 718 thousandths = _____

55. 1,414 thousandths = _____

56. 2,086 thousandths = _____

Write each decimal in thousandths.

57. 28.404 = _____ thousandths

58. 40.687 = _____ thousandths

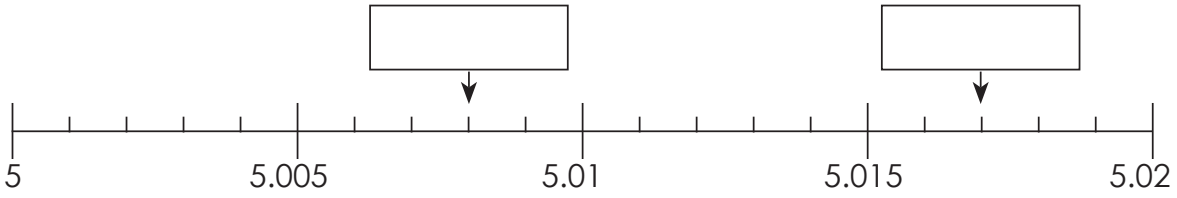
59. 53.936 = _____ thousandths

60. 2.308 = _____ thousandths

61. 66.799 = _____ thousandths

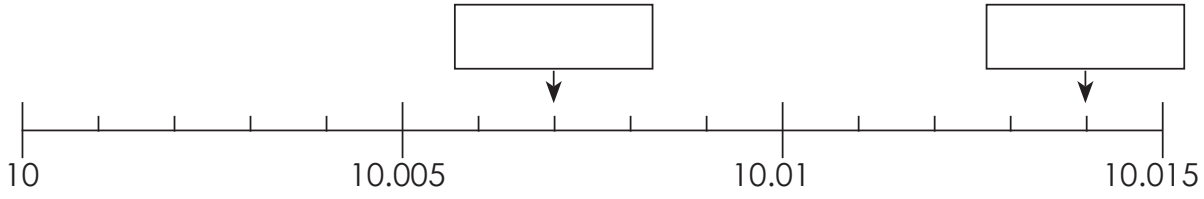
For each number line, fill in each box with the correct decimal.

62.



63.

64.



Fill in each blank with the correct answer.

65. 20.045 = ____ tens ____ ones ____ tenths ____ hundredths ____ thousandths

66. 58.297 = ____ tens ____ ones ____ tenths ____ hundredths ____ thousandths

67. 72.393 = ____ tens ____ ones ____ tenths ____ hundredths ____ thousandths

68. 36.816 = ____ tens ____ ones ____ tenths ____ hundredth ____ thousandths

69. 84.035 = ____ tens ____ ones ____ tenths ____ hundredths ____ thousandths

70. In 4.687,

(a) the digit _____ is in the thousandths place.

(b) the digit 6 is in the _____ place.

(c) the digit 8 stands for _____.

(d) the value of the digit 7 is _____.

(e) the value of the digit 4 is _____.

71. In 10.963,

(a) the digit _____ is in the ones place.

(b) the digit 3 is in the _____ place.

(c) the digit 9 stands for _____.

(d) the value of the digit 1 is _____.

(e) the value of the digit 6 is _____.

72. 0.5 more than 13.9 is _____.

73. 0.02 more than 78.66 is _____.

74. 0.006 less than 85.09 is _____.

75. 0.2 less than 6.7 is _____.

76. 0.01 less than 57.03 is _____.

Complete the number patterns.

77. 3.8, 4.7, 5.6, _____, _____

78. 15.34, 15.39, 15.44, _____, _____

79. 45.06, 45.09, 45.12, _____, _____

80. 10.088, 10.089, 10.09, _____, _____

81. 82.309, 82.314, 82.319, _____, _____

Circle the largest decimal.

82.	1.28	1.028	1.8	1.208
83.	$3\frac{605}{1,000}$	3.65	3.506	$\frac{365}{1,000}$
84.	2.91	$2\frac{901}{1,000}$	$2\frac{9}{100}$	0.291

Circle the smallest decimal.

85.	7.102	7.12	7.021	7.012
86.	$8\frac{95}{100}$	8.095	8.905	$\frac{8,059}{1,000}$
87.	3.99	$3\frac{909}{1,000}$	$3\frac{99}{1,000}$	$\frac{399}{1,000}$

Arrange the decimals in descending order.

88. 5.028, 2.058, 5.28

_____

89. 4.25, 4.025, 4.502

_____

90. 1.09, 9.01, 0.19

_____

Arrange the decimals in ascending order.

91. 198.3, 198.03, 198.003

_____

92. 273.29, 27.329, 2,732.9

_____

93. 6.017, 6.17, 6.107

_____

Round the following decimals to the nearest whole numbers.

94. 1.04 _____

95. 2.55 _____

96. 15.82 _____

97. 0.95 _____

98. 7.74 _____

Round the following decimals to 1 decimal place.

99. 1.68 _____

100. 33.38 _____

101. 2.91 _____

Round the following decimals to the nearest tenth.

102. 14.74 _____

103. 6.472 _____

104. 89.943 _____

Round the following decimals to 2 decimal places.

105. 10.963 _____

106. 59.095 _____

107. 7.007 _____

Round the following decimals to the nearest hundredths.

108. 0.671 _____

109. 2.386 _____

110. 15.709 _____

Write the following fractions as decimals.

111. $\frac{4}{10}$ = _____

112. $\frac{11}{10}$ = _____

113. $5\frac{8}{10}$ = _____

114. $9\frac{4}{5}$ = _____

115. $\frac{1}{100}$ = _____

116. $\frac{28}{100}$ = _____

117. $1\frac{77}{100}$ = _____

118. $4\frac{18}{25}$ = _____

119. $\frac{462}{1{,}000}$ = _____

120. $\frac{9}{1{,}000}$ = _____

121. $5\frac{16}{1{,}000}$ = _____

122. $45\frac{45}{50}$ = _____

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

123. 6.2 = _____

124. 49.4 = _____

125. 7.08 = _____

126. 51.25 = _____

127. 1.008 = _____

128. 25.42 = _____

Unit 10: DECIMALS (PART 2)

Examples:

1. 3.28 + 4.05 = **7.33**

$$\begin{array}{r} {}^{1}\\ 3.28 \\ +\ 4.05 \\ \hline 7.33 \end{array}$$

2. 5.94 – 2.31 = **3.63**

$$\begin{array}{r} 5.94 \\ -\ 2.31 \\ \hline 3.63 \end{array}$$

3. 9.4 × 6 = **56.4**

$$\begin{array}{r} {}^{2}\\ 9.4 \\ \times\quad 6 \\ \hline 56.4 \end{array}$$

4. 15.3 ÷ 5 = **3.06**

$$\begin{array}{r} 3.06 \\ 5\overline{)15.3} \\ 15 \\ \hline 3 \\ 0 \\ \hline 30 \\ 30 \\ \hline 0 \end{array}$$

5. Estimate 2.91 × 6.

   2.91 × 6 ≈ 3 × 6 = **18**

Solve the addition problems below.

1.
$$\begin{array}{r} 0.1 \\ +\ 0.3 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 6.2 \\ +\ 1.3 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 9.08 \\ +\ 5.57 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 5.14 \\ +\ 13.63 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 56.01 \\ +\ 72.96 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 39.78 \\ +\ 44.05 \\ \hline \end{array}$$

Solve the subtraction problems below.

7.
$$\begin{array}{r} 0.5 \\ -\ 0.2 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 9.7 \\ -\ 5.4 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 4.61 \\ -\ 2.39 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 21.75 \\ -\ 8.03 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 97.36 \\ -\ 50.72 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 80.49 \\ -\ 31.67 \\ \hline \end{array}$$

Solve the multiplication problems below.

13. 5.1×2

14. 0.4×5

15. 3.8×4

16. 2.3×6

17. 8.17×7

18. 3.45×3

19. 0.78×9

20. 12.36×5

21. 50.12×2

22. 21.55×6

Solve the division problems below.

23. $3\overline{)7.8}$

24. $5\overline{)5.25}$

25. $2\overline{)4.89}$

26. $4\overline{)16.4}$

27. $9\overline{)27.45}$

28. $4\overline{)43.4}$

29. $9\overline{)812.7}$

30. $6\overline{)402.15}$

31. $5\overline{)18}$

32. $8\overline{)10}$

33. Estimate the value of each of the following by first rounding the number to the nearest whole number. Then, decode the message below.

A $26.54 + 92.88 =$ _____

C $84.05 - 77.13 =$ _____

D $5.4 \times 8 =$ _____

E $11.99 \div 3 =$ _____

I $125.09 + 68.01 =$ _____

L $524.87 - 128.39 =$ _____

M $44.19 \times 5 =$ _____

S $35.59 \div 6 =$ _____

40	4	7	193	220	120	397	6

Solve the following story problems. Show your work in the space below.

34. Mrs. Abdul bought 2.4 lb. of meat. Mrs. Davidson bought 1.35 lb. of meat more than her. How many pounds of meat did they buy altogether?

35. Joan had $108.25. She spent $43.05 to buy a present for her mother and $12.20 on cab fare. How much money did she have left?

36. A bag of rice and two identical bags of sugar have a mass of 6 kg. The bag of rice and a bag of sugar have a mass of 4.5 kg. Find the mass of five bags of sugar.

37. A train traveled 180.63 mi. on Monday. It traveled 2.1 mi. more on Tuesday than on Monday. It traveled 1.2 mi. less on Wednesday than on Tuesday. What was the distance traveled by the train on Wednesday?

38. Lily has a mass of 24.3 kg. The mass of her father is 3 times as heavy as Lily. What is the total mass of Lily and her father?

39. A ribbon is 21.75 yd. long. Wang cuts two pieces of ribbon measuring a total of 2.4 yd. from it. The remaining piece of ribbon is then cut into three equal pieces. What is the length of each of the three pieces of ribbon?

40. A box of chocolates costs $11.45. Marcus bought three boxes of chocolates. If he gave the cashier a fifty-dollar bill, how much change would he receive?

41. Mr. Mendoza needed 12.76 gal. of paint to paint a room.

    (a) How much paint would he need if he wanted to paint three similar rooms?
    (b) If a gallon of paint cost $5, how much money did Mr. Jackson pay for the paint?

42. Mr. Woods had a bag of sugar. He sold 38.25 kg of it and packed the rest equally into six bags. If each bag of sugar had a mass of 0.75 kg, how much sugar did Mr. Woods have in the beginning?

43. Taylor bought 2 bottles of orange juice and a bottle of apple juice for $6.55. The bottle of apple juice cost $0.35 less than the bottle of orange juice. What was the cost of the bottle of orange juice?

REVIEW 5

Choose the correct answer. Write its number in the parentheses.

1. In 372.48, the digit 8 is in the _____ place.

   (1) ones
   (2) tenths
   (3) hundredths
   (4) thousandths

   ( )

2. Express $\frac{2}{5}$ as a decimal.

   (1) 0.25
   (2) 0.4
   (3) 0.5
   (4) 2.5

   ( )

3. Find the sum of 5.98 and 1.93.

   (1) 4.05
   (2) 6.39
   (3) 7.91
   (4) 8.91

   ( )

4. Express 62.458 in thousandths.

   (1) 624.58 thousandths
   (2) 6,245.8 thousandths
   (3) 62,458 thousandths
   (4) 624,580 thousandths

   ( )

5. Round 37.46 to 1 decimal place.

   (1) 37.0
   (2) 37.4
   (3) 37.5
   (4) 38.0

   ( )

6. 288.63 ÷ 9 = _____

   (1) 3.207
   (2) 32.07
   (3) 32.7
   (4) 320.7

   ( )

7. Estimate the value of 12.99 + 5.5 by rounding each number to the nearest whole number first.

(1) 17 (3) 19

(2) 18 (4) 20 ( )

Write your answers on the lines.

8. 5 hundreds, 4 tens, 7 tenths, and 1 thousandth written in numerals is ☐.

_____

9. Write 1.68 as a mixed number in its simplest form. _____

10. In 89.437, the value of the digit 4 is ☐. _____

11. $9\frac{35}{100} = 9 +$ ☐

Write your answer as a decimal. _____

12. Jar A contains 1.9 gallons of water. Jar B contains 2.1 gallons of water and Jar C contains 1.2 gallons of water. What is the total volume of water in the three jugs? Write your answer as a decimal.

_____

13. Find the product of 1.92 and 8. Round your answer to the nearest tenth.

_____

14. 305.419 = 3 hundreds 5 ones 4 tenths ☐ thousandths

_____

15. Arrange the following decimals in descending order.

5.06 0.56 5.6 5.006

_____

16. Katrina has a ribbon 3.78 m long. The length of her ribbon is 3 times as long as Sarah's ribbon. How much longer is Katrina's ribbon than Sarah's ribbon?

_____

17. Mrs. Cho bought 2.76 lb. of grapes and divided the grapes equally among three neighbors and herself. How much did each person get?

_____

Solve the following story problems. Show your work in the space below.

18. Elsie travels 12.9 mi. from her house to her office every day. She travels the same distance back home. What is the total distance traveled by Elsie from Monday to Friday?

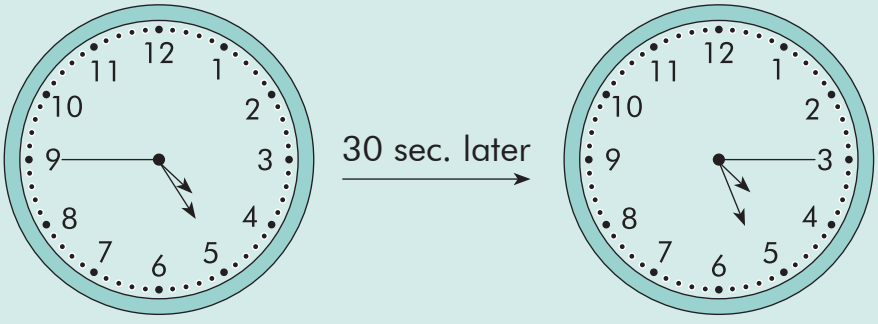
19. A boutique paid $2,954.10 to its supplier for 12 similar dresses and 7 similar blouses. If all the dresses cost $2,376.60, how much did each blouse cost?

20. Sheila used 3.6 m of cloth from a 10-m cloth to sew two similar blouses. The remaining cloth was used to sew four identical skirts. How much cloth did Sheila use to sew each skirt?

Unit 11: TIME

Examples:

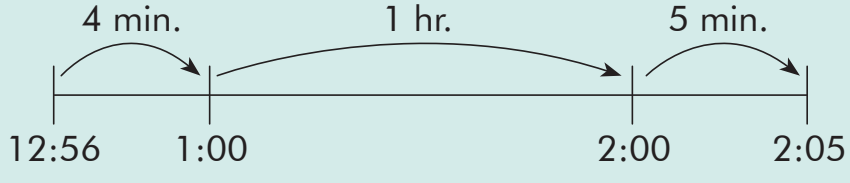
1. Draw the missing minute and second hands on the clock shown on the right.



2. Write the time two thirty and twenty-five seconds in the afternoon by separating hours, minutes, and seconds with a colon.

   2:30:25 P.M.

3. Noel started reading a book at 12:56 P.M. She finished reading the book at 2:05 P.M. How long did she take to read the book?

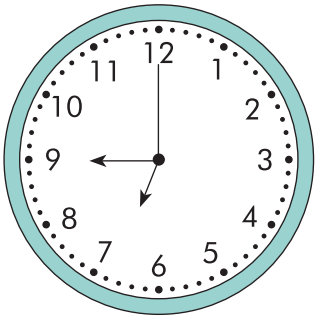


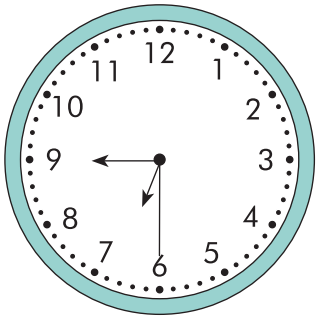
   1 hr. + 4 min. + 5 min. = 1 hr. 9 min.

   She took **1 hr. 9 min.** to read the book.

Write the correct length of time on the lines.

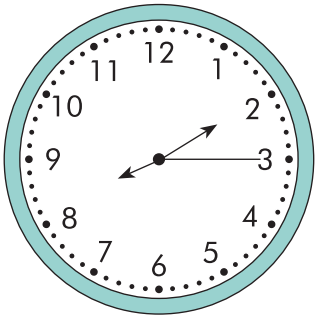
1.

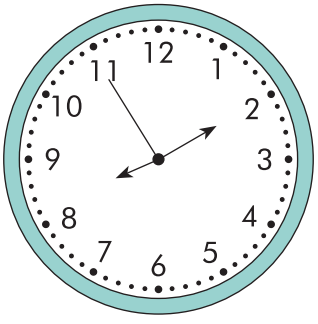




James took _____ sec. to get out of his bed.

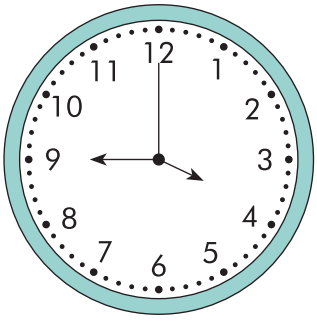
2.

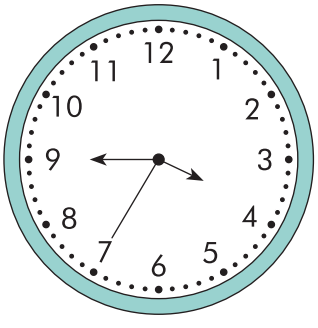




James took _____ sec. to wash his hands.

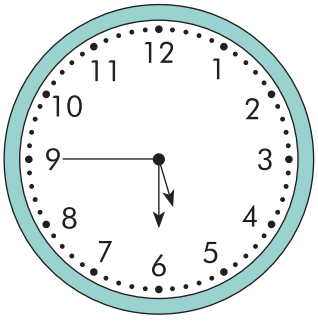
3.

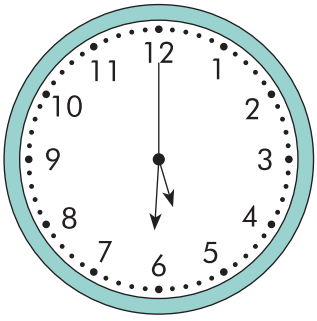




James took _____ sec. to walk from his room to the kitchen.

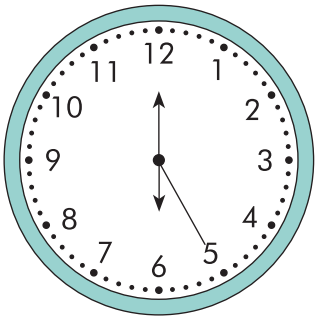
4.

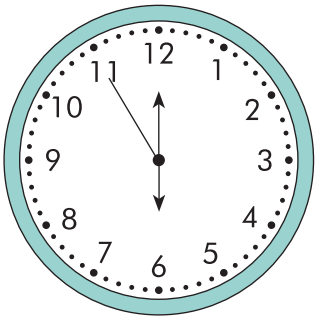




James took _____ sec. to pick a piece of paper from the floor.

5.

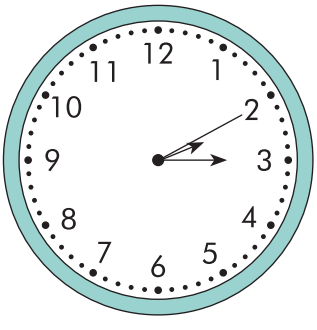


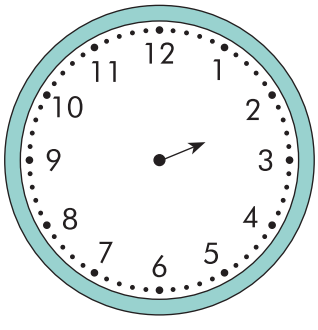


James took _____ sec. to wash his spoon and fork.

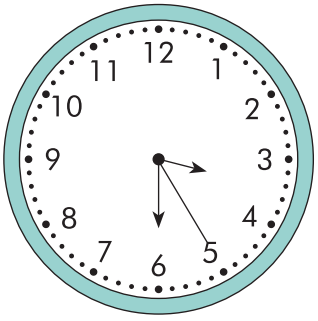
Draw the missing minute and second hands on each clock shown on the right.

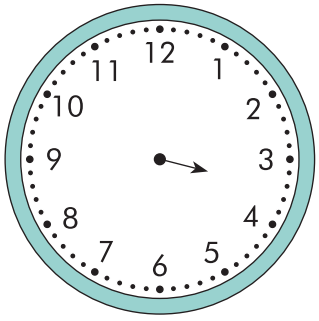
6. Leyla took 40 sec. to read a sentence in her book.



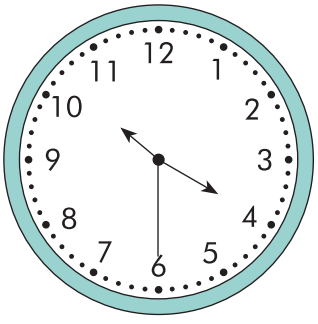


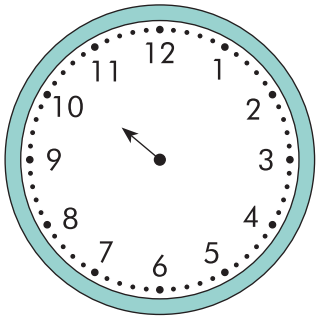
7. Angie took 20 sec. to draw an apple.



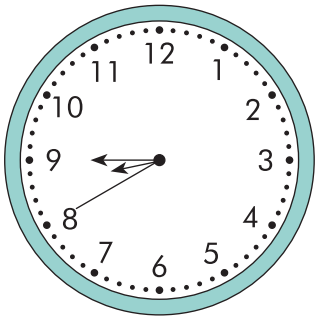


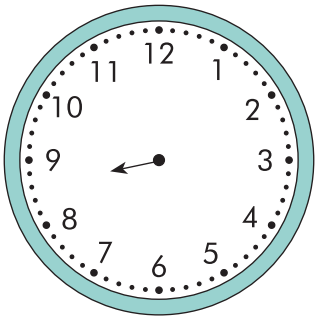
8. Andre took 60 sec. to walk to the garden.



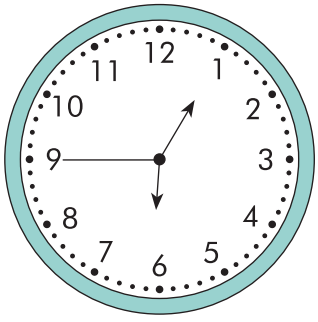


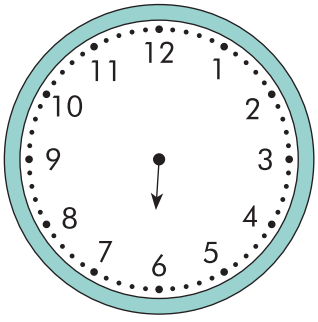
9. Jessica took 15 sec. to color a square.





10. Leo took 55 sec. to wash two plates.





Write the expected time.

11. It is 5:34:21 P.M.

What time will it be in 1 hr. 3 min. 45 sec.? _____

12. It is 10:55:47 A.M.

What time will it be in 2 hr. 6 min. 34 sec.? _____

13. It is 8:20:39 P.M.

What time will it be in 8 hr. 19 min. 54 sec.? _____

14. It is 6:41:36 A.M.

What time will it be in 7 hr. 49 min. 20 sec.? _____

15. It is 12:02:59 P.M.

What time will it be in 0 hr. 59 min. 59 sec.? _____

Write the elapsed time.

16. It is 11:27:06 A.M.

    What time was it 6 hr. 42 min. 42 sec. ago? _____

17. It is 3:28:15 P.M.

    What time was it 4 hr. 22 min. 10 sec. ago? _____

18. It is 7:19:21 A.M.

    What time was it 10 hr. 11 min. 8 sec. ago? _____

19. It is 10:44:30 P.M.

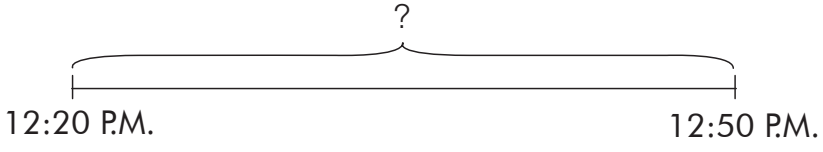
    What time was it 5 hr. 53 min. 25 sec. ago? _____

20. It is 2:08:16 A.M.

    What time was it 3 hr. 39 min. 14 sec. ago? _____

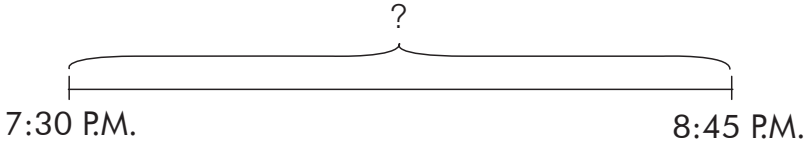
For each time line, fill in each blank with the correct answer.

21.



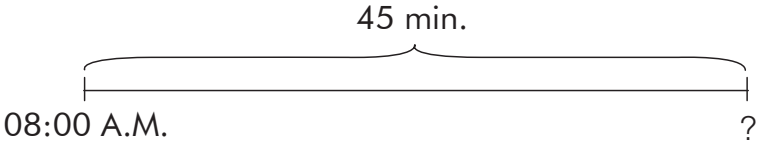
Mindy took _____ to travel from the library to her house.

22.



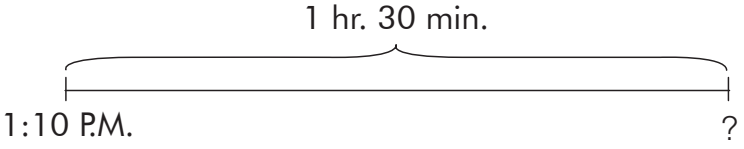
Isra's piano lesson lasted _____.

23.



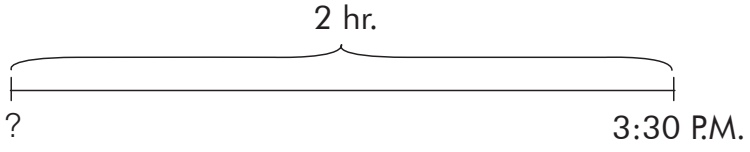
Peggy finished her swimming lesson at _____.

24.



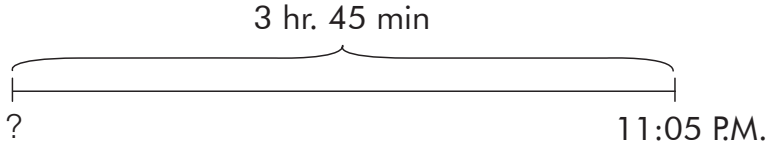
The television program ended at _____.

25.



Jerome took a nap at _____.

26.



Wendy started studying at _____.

Solve the following story problems. Show your work in the space below.

27. Mike started doing his project at 5:15 P.M. He finished his project at 8:30 P.M. How long did he take to do his project?

28. The time shown on Basil's watch is 3:20 P.M. If his watch is 30 minutes fast, what should be the correct time?

29. Benjamin reached his grandmother's house at 1:40 P.M. If the trip from his house to his grandmother's house took 25 min., at what time did Benjamin leave his house?

30. Mrs. Murray went to a shopping center at 4:00 P.M. She finished her shopping at 5:45 P.M. How long did she spend at the shopping center?

31. A concert lasted 3 hr. 15 min. If the concert ended at 11:55 P.M., at what time did the concert start?

32. The time it takes for a plane to fly from Boston to Washington, D.C. is 90 min. If the plane leaves Boston at 12:40 P.M., at what time will the plane reach Washington, D.C.?

33. An exam started at 8:05 A.M. It lasted 2 hr. 30 min. At what time did the exam end?

34. A coach traveled from Town X to Town Y. The coach started the trip at 10:35 P.M. and reached Town Y at 7:15 A.M. the next morning. How long was the trip?

35. When it is 9:30 P.M. in New York, the clock in San Francisco shows 12:30 P.M. If the time in San Francisco is 4 P.M., what time is it in New York?

Unit 12: PERIMETER AND AREA

Examples:

1. The area of a rectangular paper is 90 cm^2. Its length is 10 cm. Find its width.

$$\text{Area} = \text{Length} \times \text{Width}$$
$$90\ cm^2 = 10\ cm \times \text{Width}$$
$$\text{Width} = 90 \div 10 = 9\ cm$$

Its width is **9 cm**.

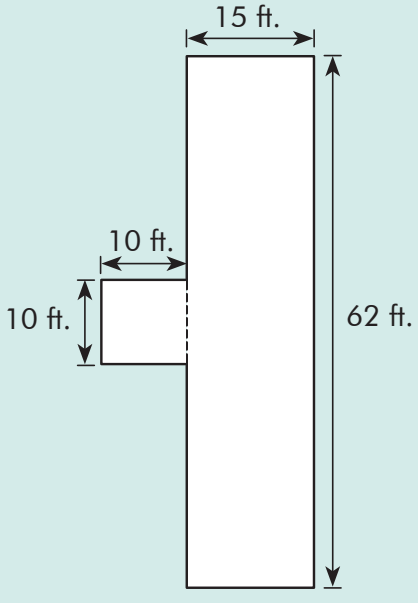
2. The perimeter of a square is 36 in. Find its area.

$$\text{Perimeter} = 4 \times \text{Length}$$
$$36\ in. = 4 \times \text{Length}$$
$$\text{Length} = 36 \div 4 = 9\ in.$$

$$\text{Area} = \text{Length} \times \text{Length}$$
$$= 9 \times 9$$
$$= 81\ in.^2$$

Its area is **81 $in.^2$**.

3. Find the area of the figure below.



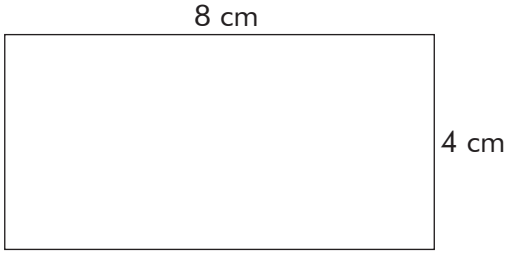
$$\text{Area of square} = 10 \times 10$$
$$= 100\ ft.^2$$
$$\text{Area of rectangle} = 15 \times 62$$
$$= 930\ ft.^2$$

$$100 + 930 = 1{,}030\ ft.^2$$

The area of the figure is **1,030 $ft.^2$**.

Find the perimeter and area of each figure.

1.



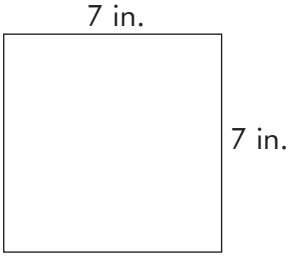
Perimeter of rectangle = _____ + _____ + _____ + _____

= _____ cm

Area of rectangle = _____ × _____

= _____ cm^2

2.



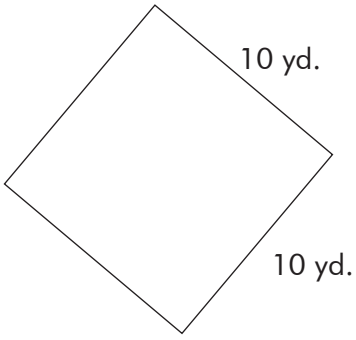
Perimeter of square = _____ + _____ + _____ + _____

= _____ in.

Area of square = _____ × _____

= _____ $in.^2$

3.



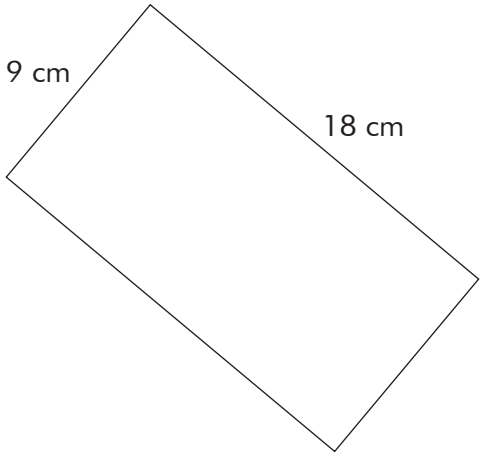
Perimeter of square = _____ + _____ + _____ + _____

= _____ yd.

Area of square = _____ × _____

= _____ $yd.^2$

4.



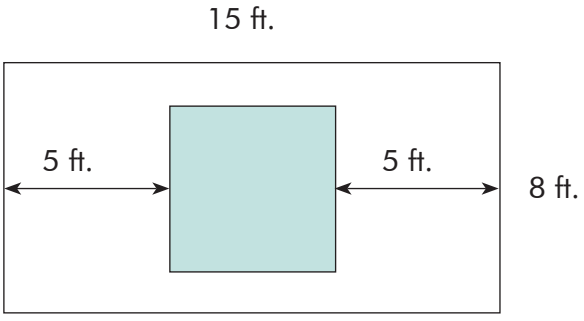
Perimeter of rectangle = _____ + _____ + _____ + _____

= _____ cm

Area of rectangle = _____ × _____

= _____ cm^2

5.



Perimeter of rectangle = _____ + _____ + _____ + _____

= _____ ft.

Area of square = _____ × _____

= _____ $ft.^2$

Solve the problems below. Write your answers on the lines.

6. The perimeter of a rectangle is 44 in. If the width of the rectangle is 5 in., what is its length?

_____

7. The perimeter of a square is 52 cm. Find its length. _____

8. The area of a rectangle is 36 cm^2. Find the length of the rectangle if its width is 4 cm.

_____

9. The perimeter of a rectangle is 52 yd. Find its width if its length is 15 yd.

_____

10. The area of a square is 81 ft.^{2}. Find its length. _____

11. The area of a square table is 64 cm^2. Find the perimeter of the square table.

_____

12. The perimeter of a rectangle is 48 in. If the length of the rectangle is two times its width, what is the area of the rectangle?

_____

13. The perimeter of a table is 6 ft. If the width is 1 ft., find its area.

_____

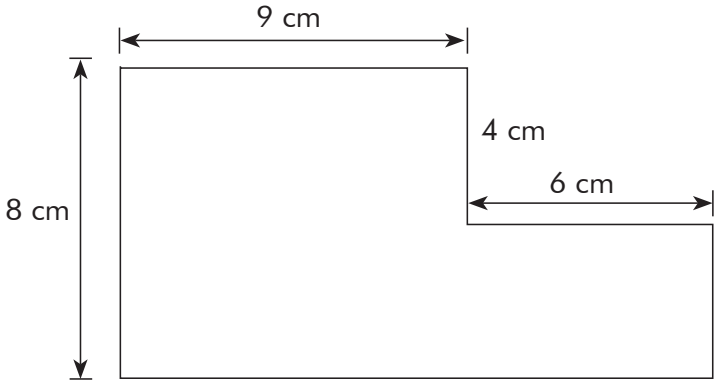
14. The area of a square room is 16 m^2. Find the perimeter of the room.

_____

15. The area of a rectangular field is 150 yd.^{2}. If its length is $1\frac{1}{2}$ times its width, find the perimeter of the field.

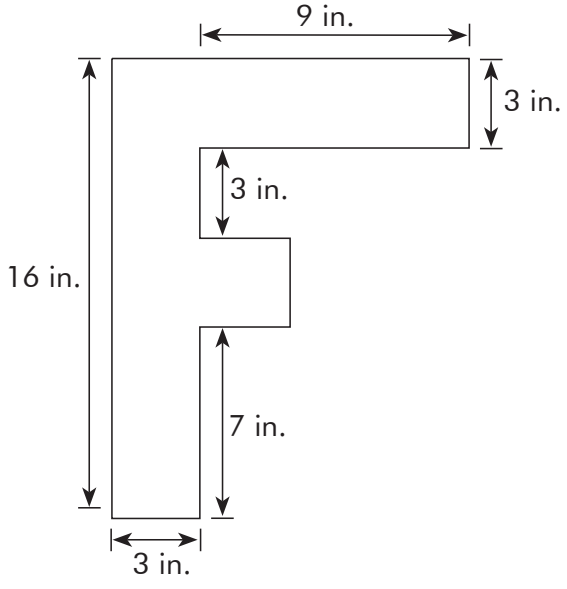
_____

16. The figure below is made up of two rectangles. Find its perimeter.



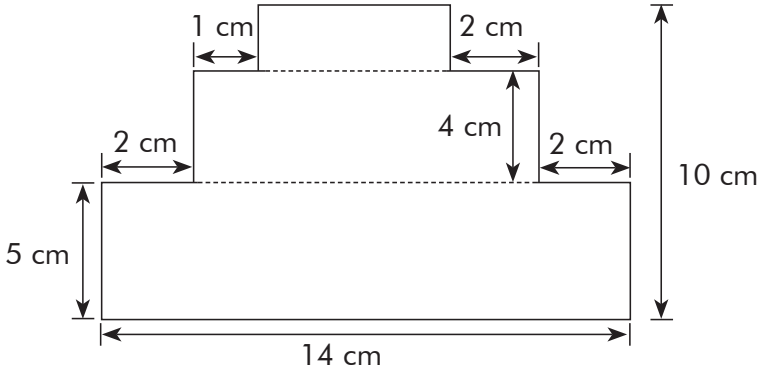
_____

17. The figure below is made up of a square and two rectangles. Find its area.



_____

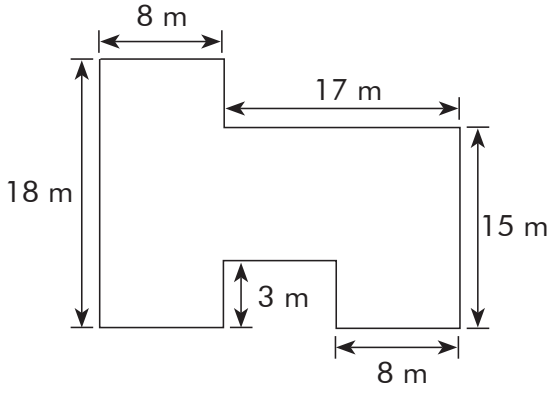
18. The figure below is made up of three rectangles. Find its area and perimeter.



Area = _____

Perimeter = _____

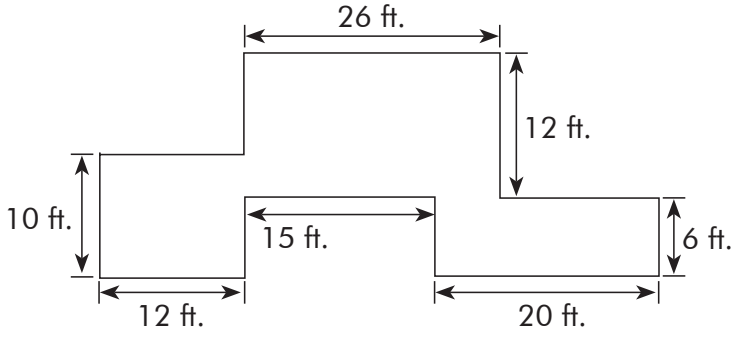
19. Find the area and perimeter of the figure below.



Area = _____

Perimeter = _____

20. Find the area and perimeter of the figure below.

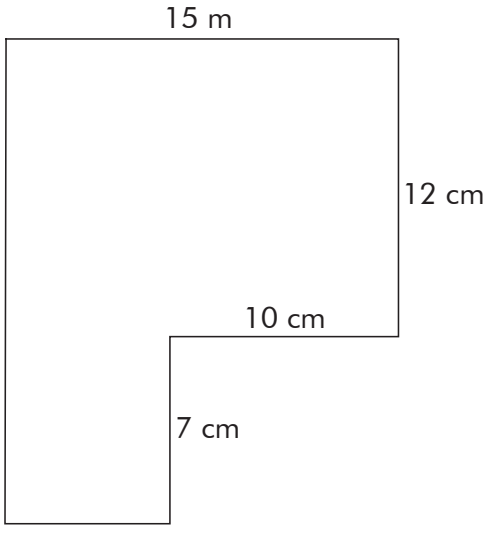


Area = _____

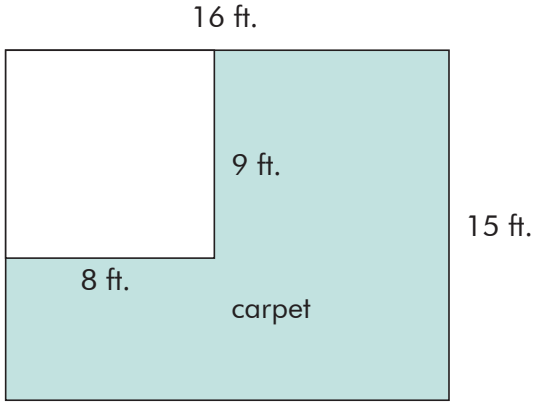
Perimeter = _____

Solve the following story problems. Show your work in the space below.

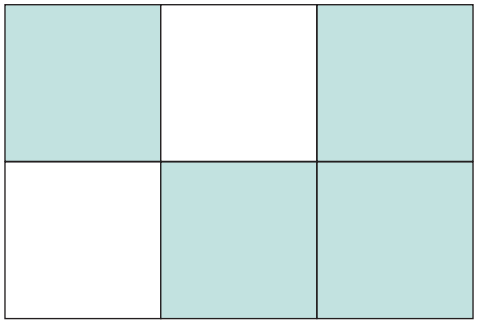
21. The figure below shows the floor plan of Rita's house. How big is her house?



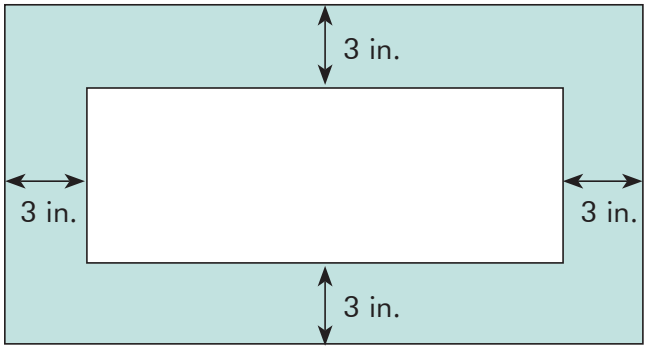
22. The figure below shows an exhibition hall. Part of the exhibition hall is covered with carpet. Find the area that is covered with carpet.



23. The figure below is made up of six identical squares of a total area of 294 cm^2. Find the perimeter of the shaded portion.



24. A white rectangular board measuring 28 in. long and 16 in. wide is placed in the center of a larger rectangular board. It creates a border of 3 in. around it. Find the area not covered by the white rectangular board.

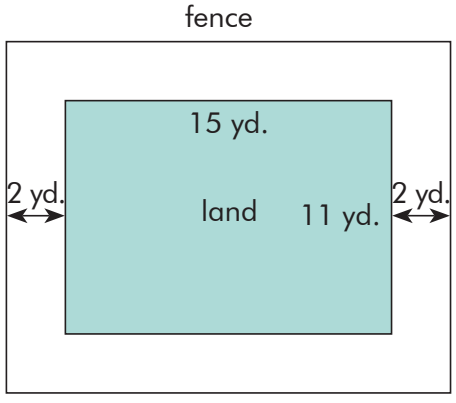


25. Mary's room measures 8 m by 7 m. If the area not covered by carpet measures 4.5 m by 4 m, find the floor area in her room that is covered by carpet.

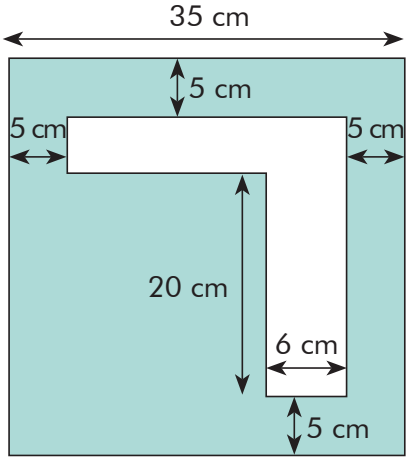
26. A farmer had a plot of land measuring 15 yd. by 11 yd. The farmer put up a fence, leaving a margin of 2 yd. wide all round it.

(a) Find the length of the fence.

(b) If the fence cost $3.85 a yard, how much did it cost to put a fence round the plot of land?



27. Tammy bought a square cardboard. She cut a letter "L" from the cardboard as shown below. Find the remaining area of the cardboard.



REVIEW 6

Choose the correct answer. Write its number in the parentheses.

1. The length of a rectangle is 32 in. Its length is twice its width. What is the perimeter of the rectangle?

   (1) 48 in.
   (2) 96 in.
   (3) 192 in.
   (4) 512 in. ( )

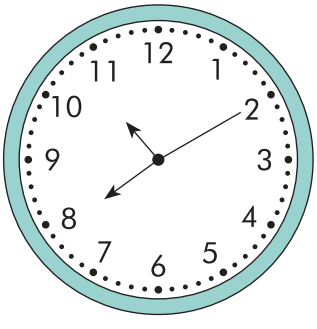
2. Which of the following shows ten fifty-five and thirty-six seconds at night?

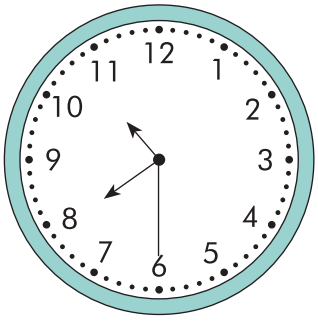
   (1) 10.55.36 P.M.
   (2) 10:55:36 P.M.
   (3) 1055:36 P.M.
   (4) 10.55:36 P.M. ( )

3. The length of a square field is 256 m. Paul ran 6 times around the field. Find the total distance that he ran.

   (1) 1,024 m
   (2) 1,536 m
   (3) 4,096 m
   (4) 6,144 m ( )

The clocks below show the length of time Brian takes to type a sentence.





4. How many seconds does Brian take to type the sentence?

(1) 4 (3) 30

(2) 20 (4) 40 ( )

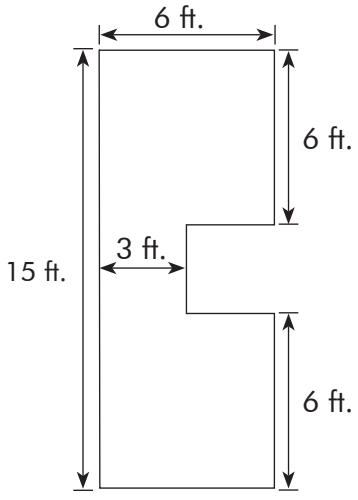
5. The perimeter of the figure below is _____.

(1) 36 ft.

(2) 42 ft.

(3) 48 ft.

(4) 51 ft.



( )

6. The perimeter of a rectangle is 64 cm. If its length is 19 cm, find its width.

(1) 13 cm (3) 22.5 cm

(2) 15 cm (4) 26 cm ( )

7. Jeremy started practicing for his piano recital at 4:40 P.M. He stopped at 6:15 P.M. How long did he practice for his piano recital?

(1) 1 hr. 45 min. (3) 1 hr. 25 min.

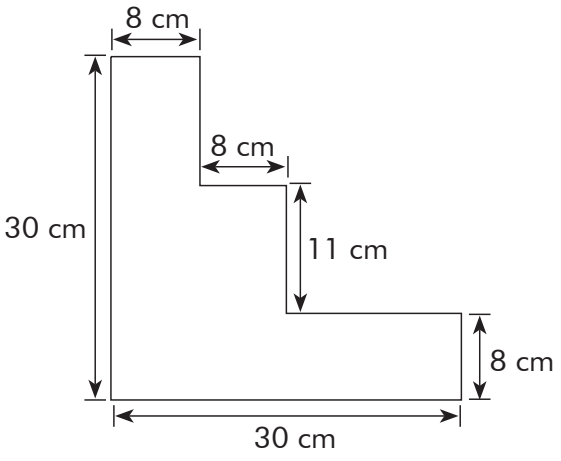
(2) 1 hr. 35 min. (4) 1 hr. 15 min. ( )

Write your answers on the lines.

8. A square has a perimeter of 40 yd. What is its area?

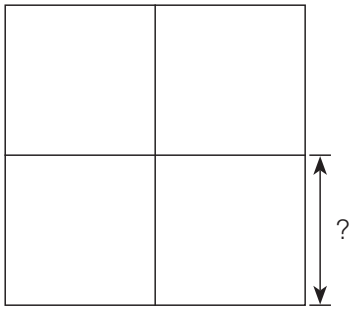
_____

9. The figure below is made of 3 rectangles. Find the area of the figure.



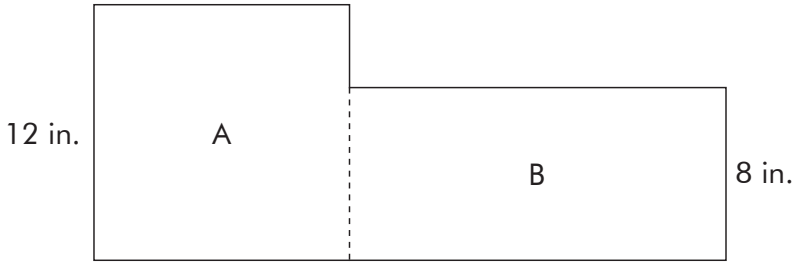
_____

10. The figure is made up of 4 identical squares. It has an area of 256 ft.^{2}. What is the length of each square?



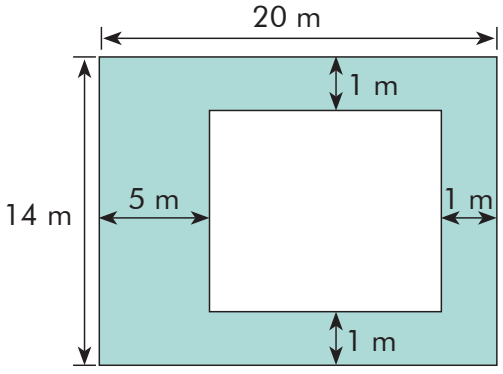
_____

11. The figure below is made up of a square and a rectangle. Square A and Rectangle B have the same area. What is the perimeter of the figure?



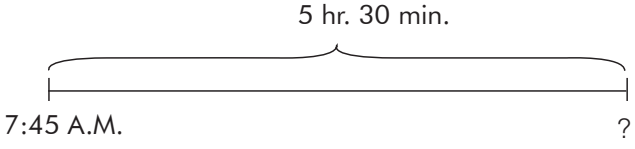
_____

12. Find the area of the shaded part.



_____

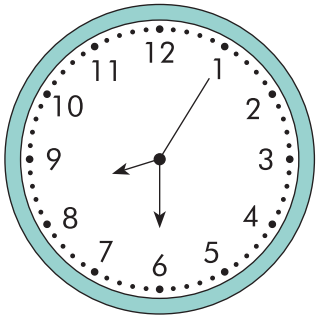
13. Kisha started her school lessons at 7:45 A.M. Her lessons lasted for 5 hr. 30 min. What time did her lessons end?

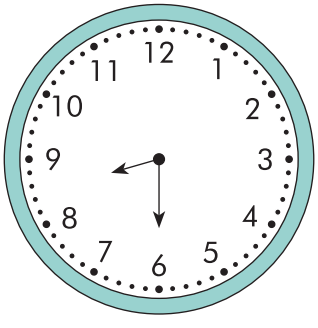


_____

14. Write the time ten twenty-two and forty-three seconds at night. _____

15. Mandy took 40 sec. to peel an apple. Draw the correct second hand on the clock shown on the right.





Solve the following story problems. Show your work in the space below.

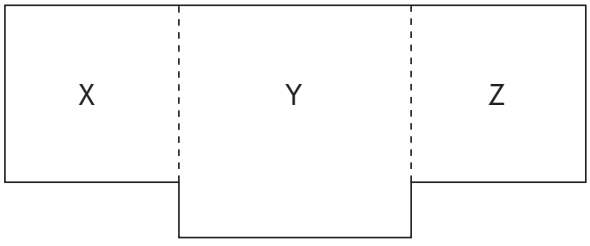
16. Mr. Edmonds wants to tile a 2-foot wide pavement around a swimming pool measuring 15 ft. by 12 ft.

    (a) Find the area of pavement Mr. Edmonds needs to tile.

    (b) How much does he have to pay if the tile costs $29 per square foot?

17. Mr. Simon works from 9:30 P.M. every night. He will stop work at 7:55 A.M. the next day. How long does he work every night?

18. In the figure, X and Z are identical squares. Y is a bigger square. The area of square X is 49 cm^2 and the area of square Y is 81 cm^2. What is the perimeter of the figure?



19. Phil has a piece of cardboard of length 120 in. Its width is $\frac{3}{5}$ as long as its length. Find the area of the cardboard.

20. When it is 7:00 A.M. in Denver, the clock in London, England shows 2:00 P.M. If Jennifer wants to call her mother who is in London at 8:00 P.M., at what time should she make the call in Denver?

Unit 13: SYMMETRY

Examples:

1. Which of the following figures are symmetrical?

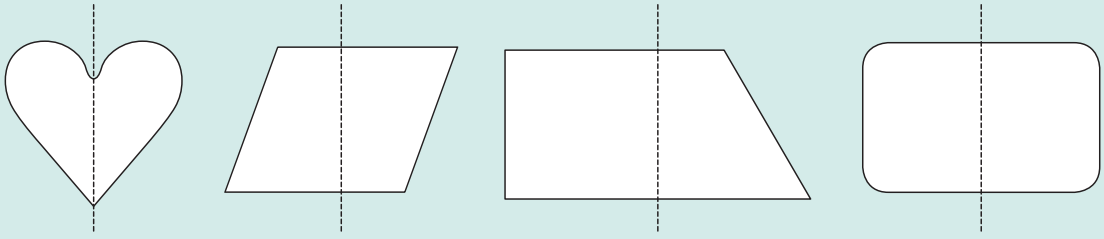
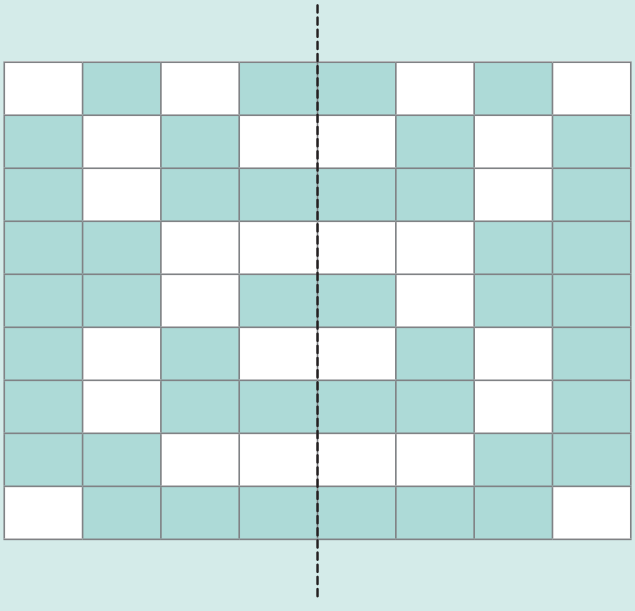


Figure 1 Figure 2 Figure 3 Figure 4

Figures 1 and 4 are symmetrical.

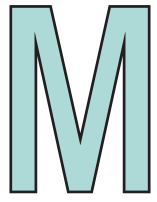
2. Complete the symmetrical pattern below.



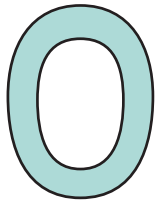
Some of the letters shown below are symmetrical. Write *Yes* in the blank if the letter is symmetrical and write *No* in the blank if the letter is not symmetrical.

1. 

_____

2. 

_____

3. 

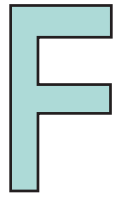
_____

4. 

_____

5. 

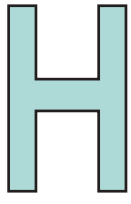
_____

6. 

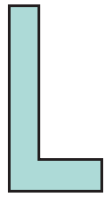
_____

7. 

_____

8. 

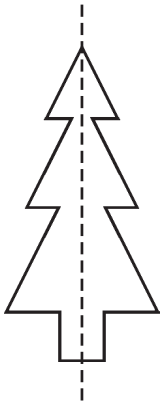
_____

9. 

_____

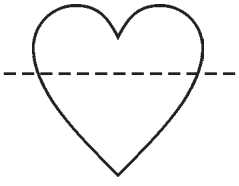
Study each figure carefully. Write *Yes* in the blank if the dotted line is a line of symmetry or *No* in the blank if the dotted line is not a line of symmetry.

10.



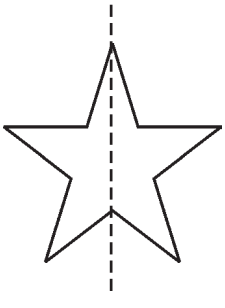
_____

11.



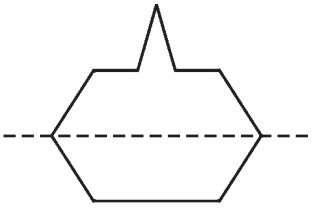
_____

12.



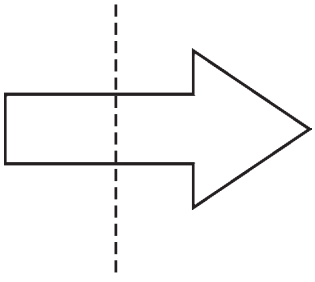
_____

13.



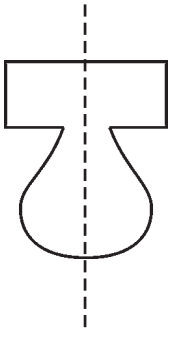
_____

14.



_____

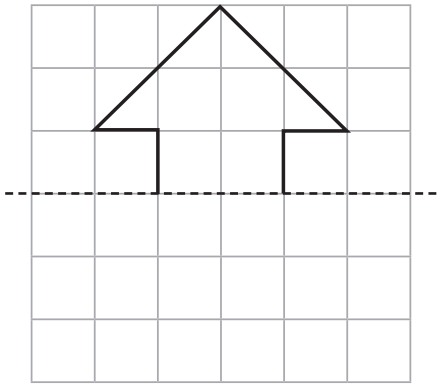
15.



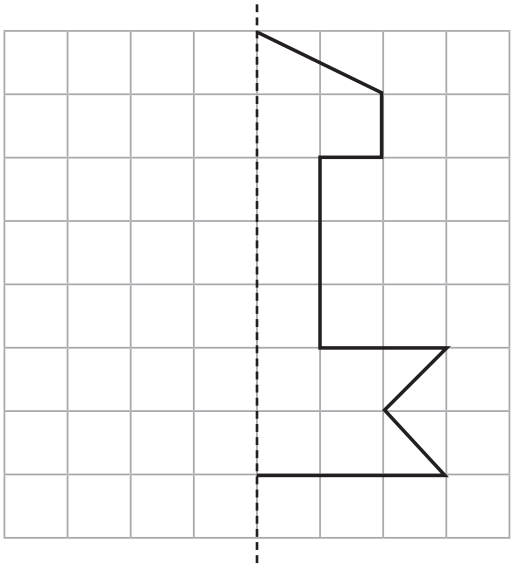
_____

Complete the symmetrical figures.

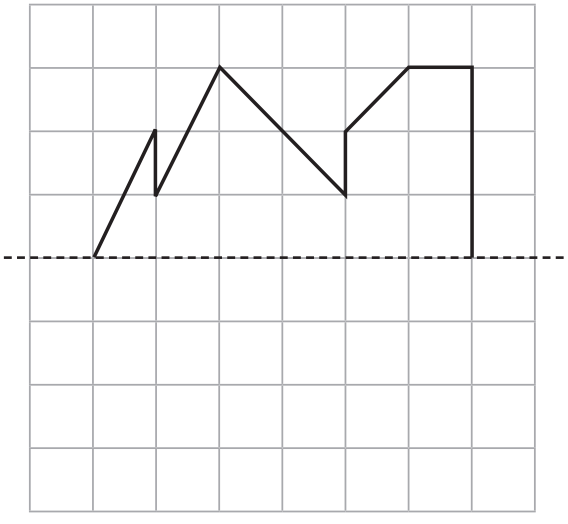
16.



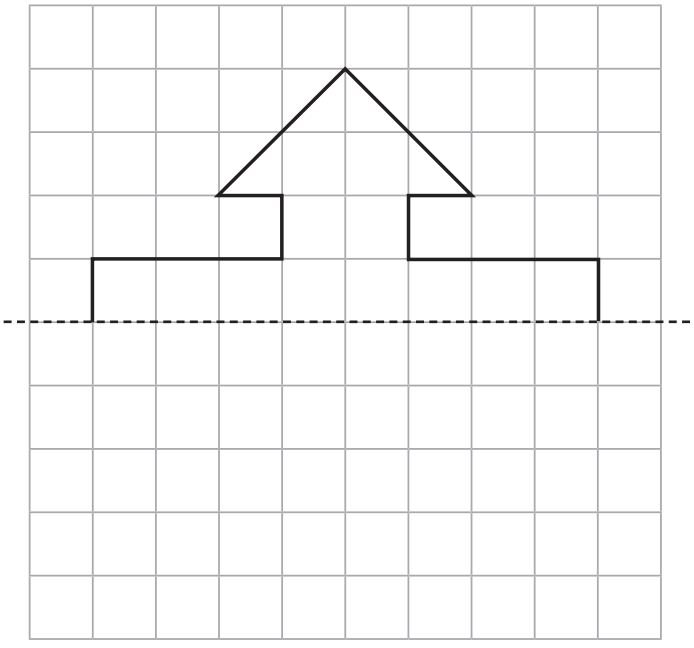
17.



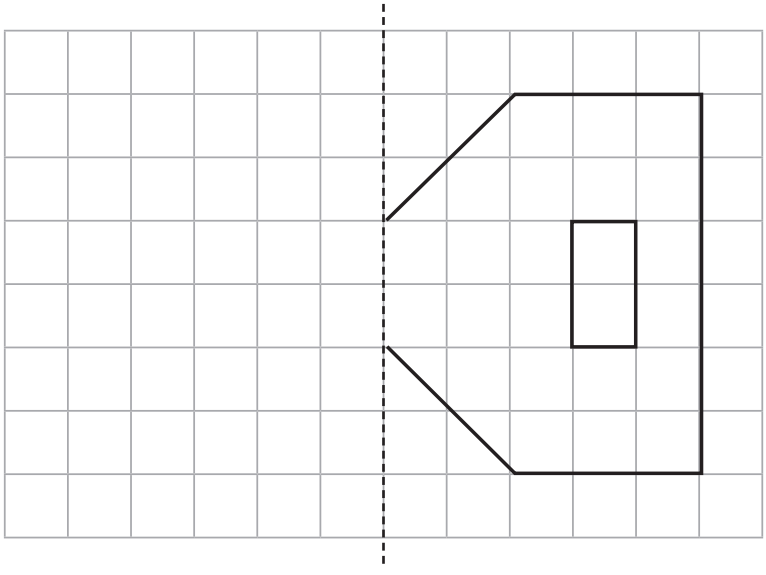
18.



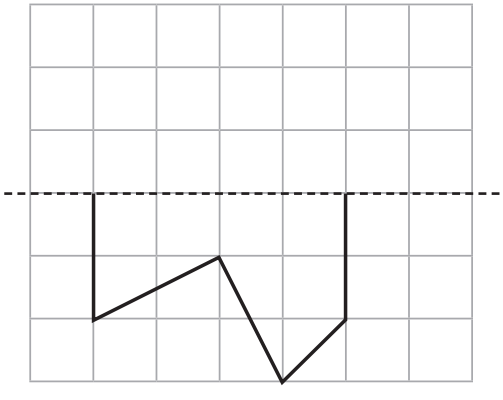
19.



20.

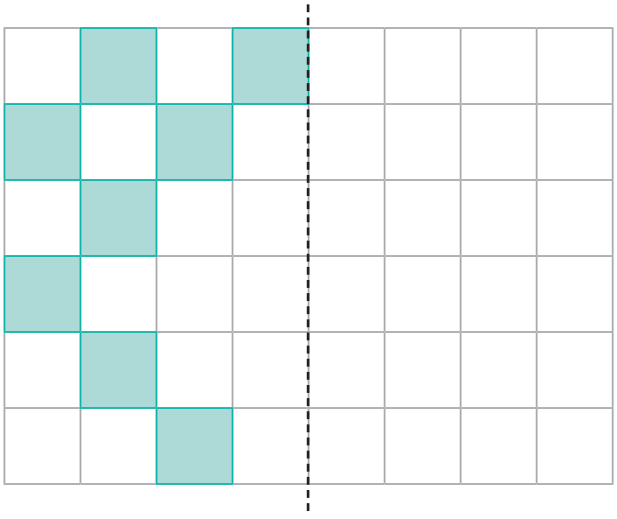


21.

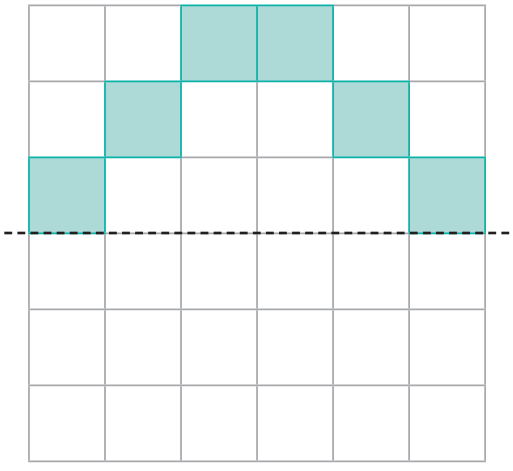


Complete the symmetrical patterns.

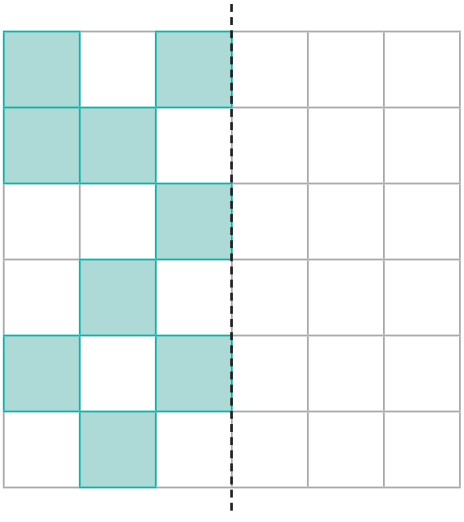
22.



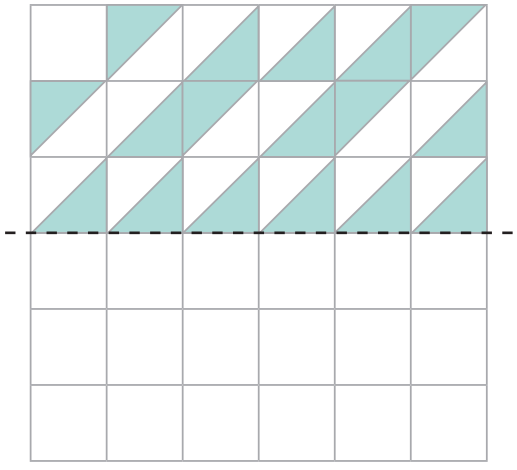
23.



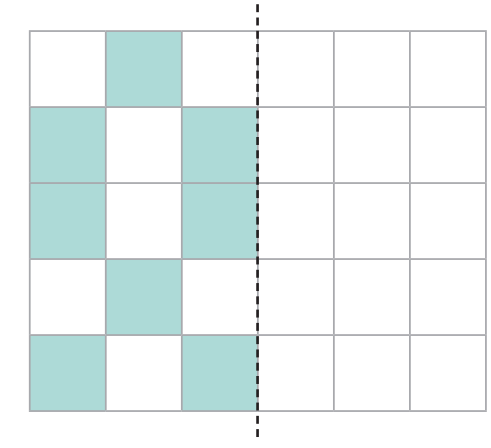
24.



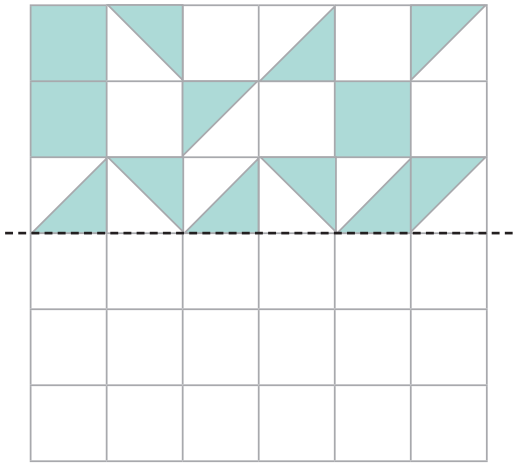
25.



26.



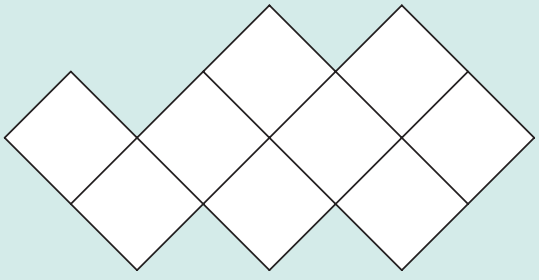
27.



Unit 14: TESSELLATIONS

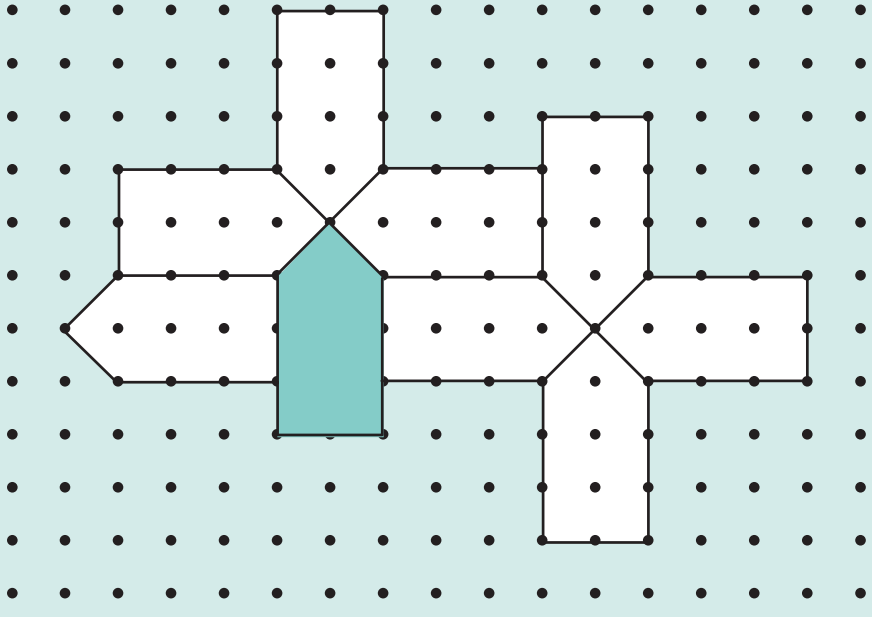
Examples:

1. Identify the unit shape in the tessellation below.



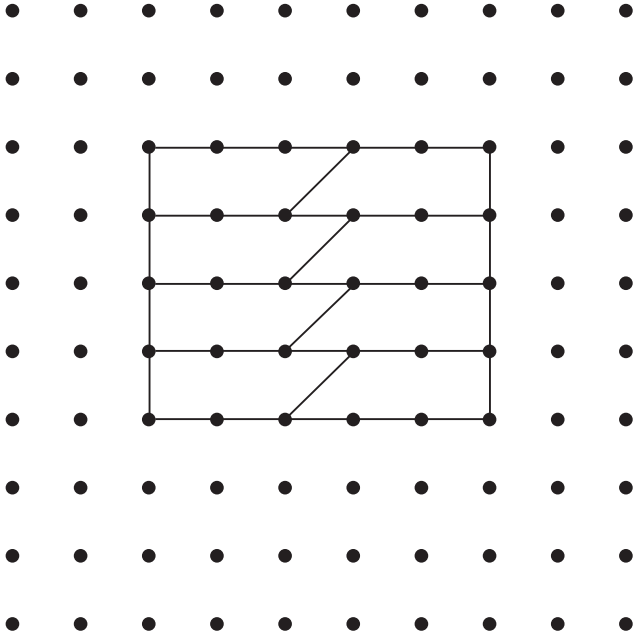
The unit shape is  .

2. Make a tessellation of the unit shape by adding 8 more unit shapes.

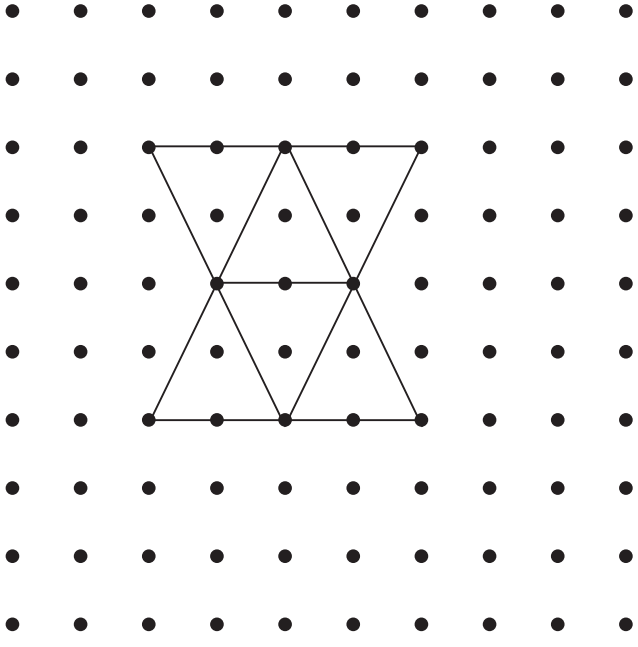


For each tessellation, identify the unit shape by shading it.

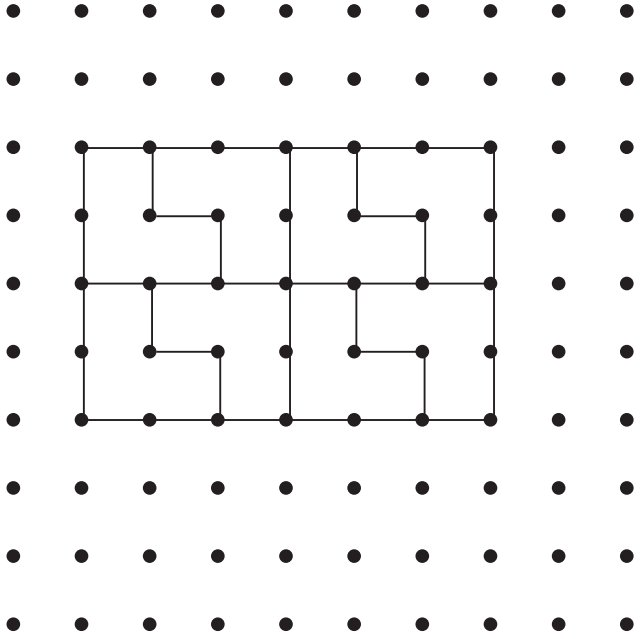
1.



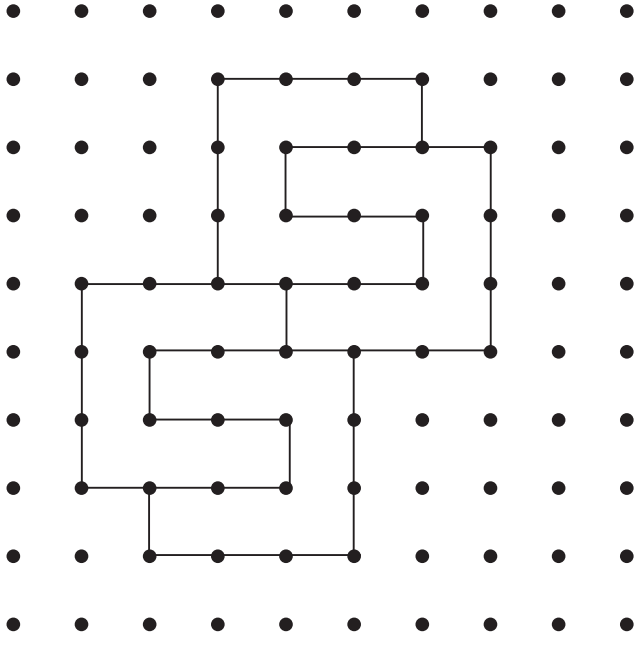
2.



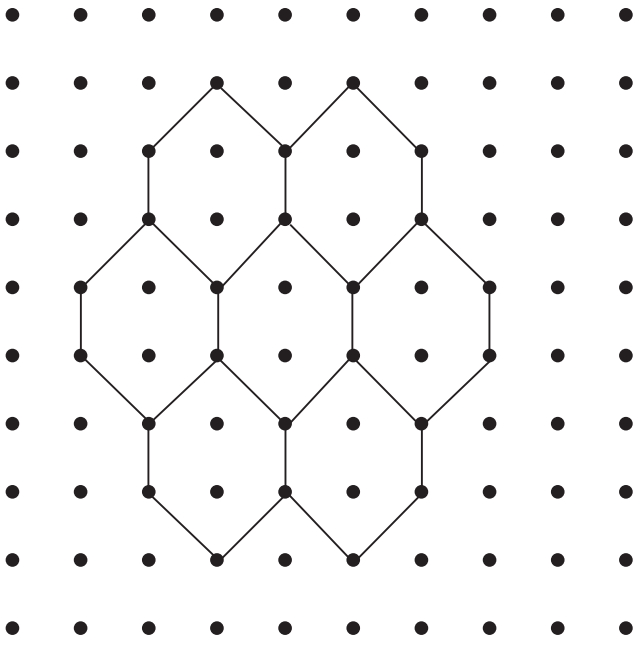
3.



4.

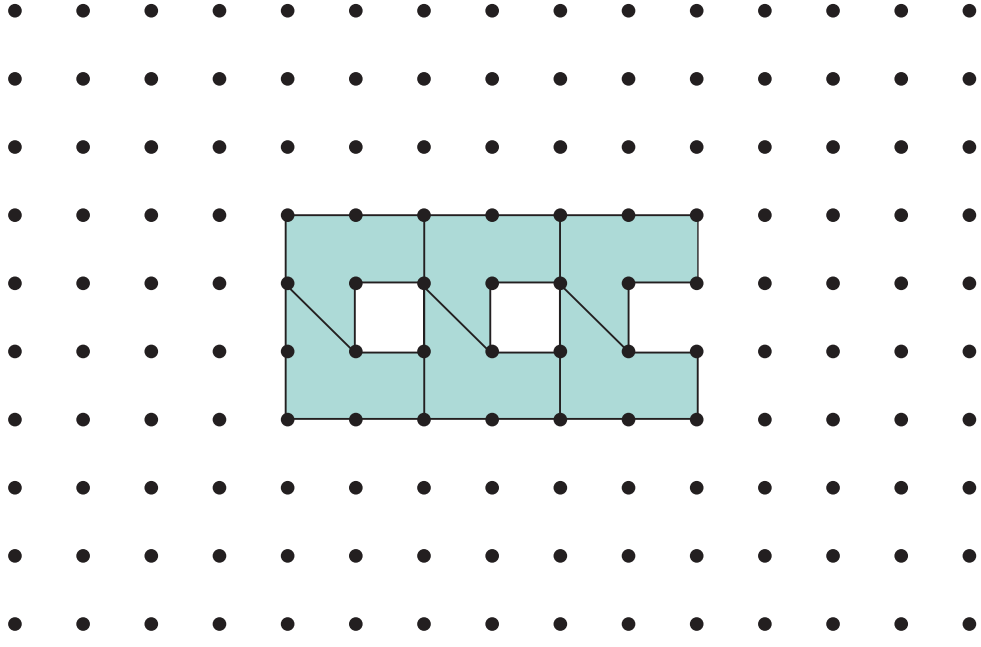


5.

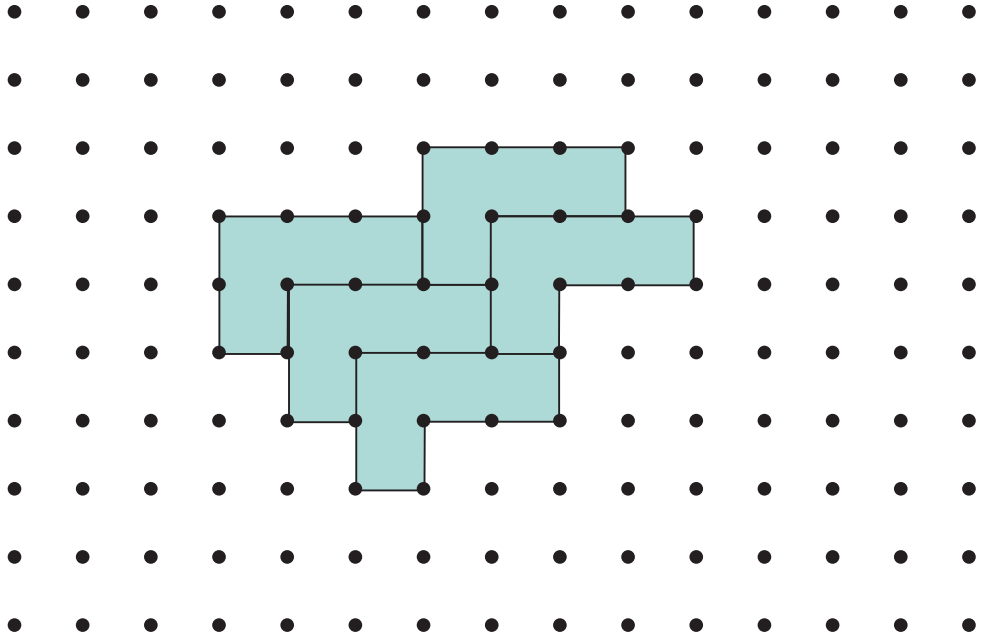


State if the following shapes tessellate or repeat without gaps or overlaps. Write *Yes* in the blank if it tessellates or *No* if it does not tessellate.

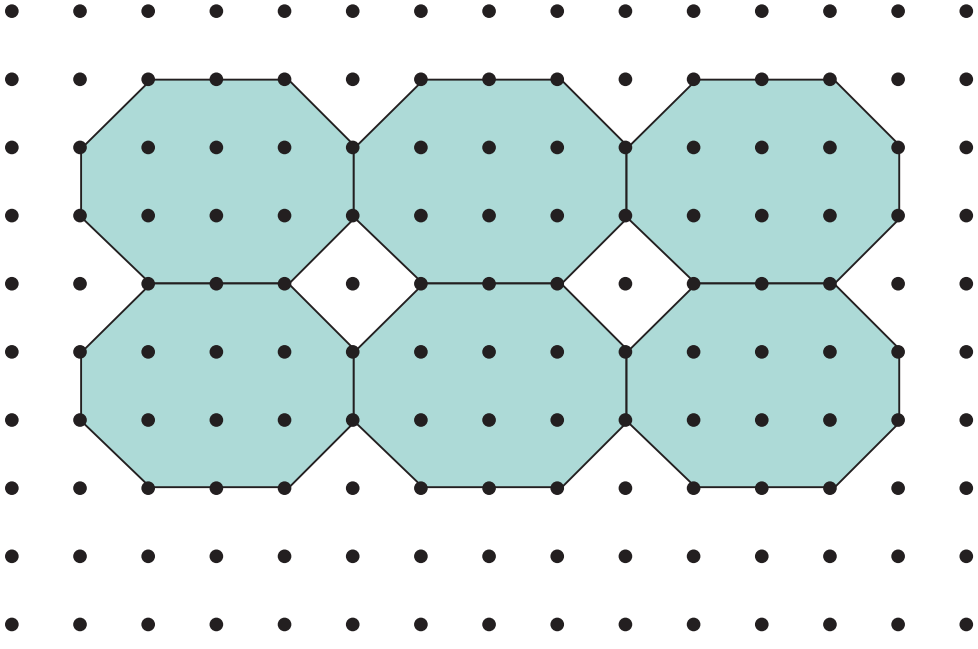
6.



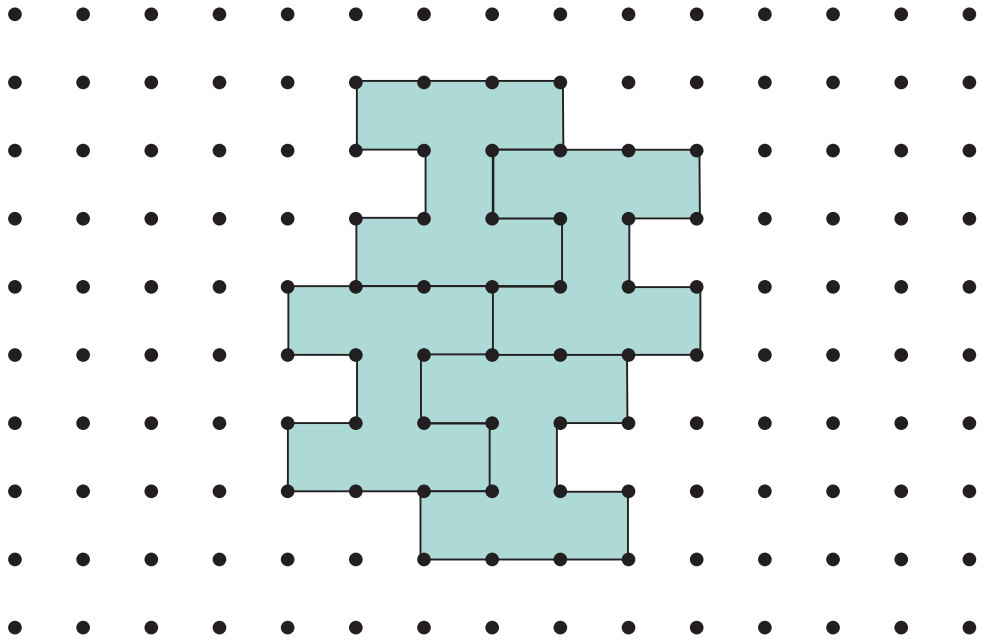
7.



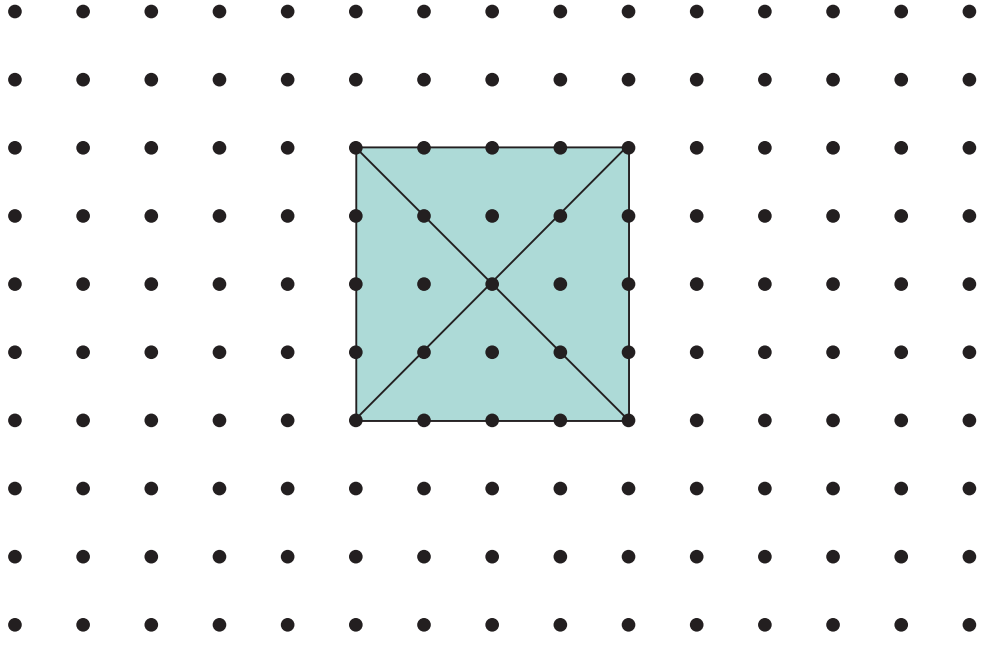
8.



9.

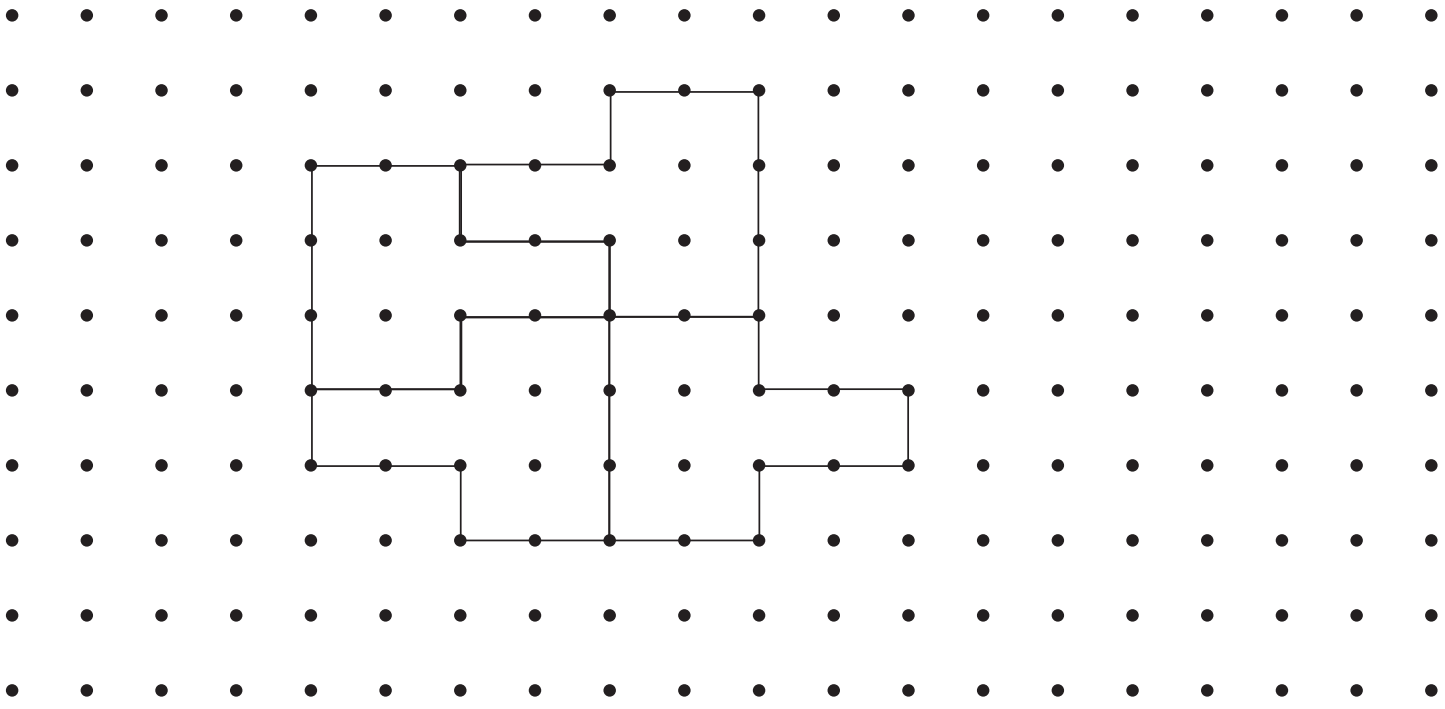


10.

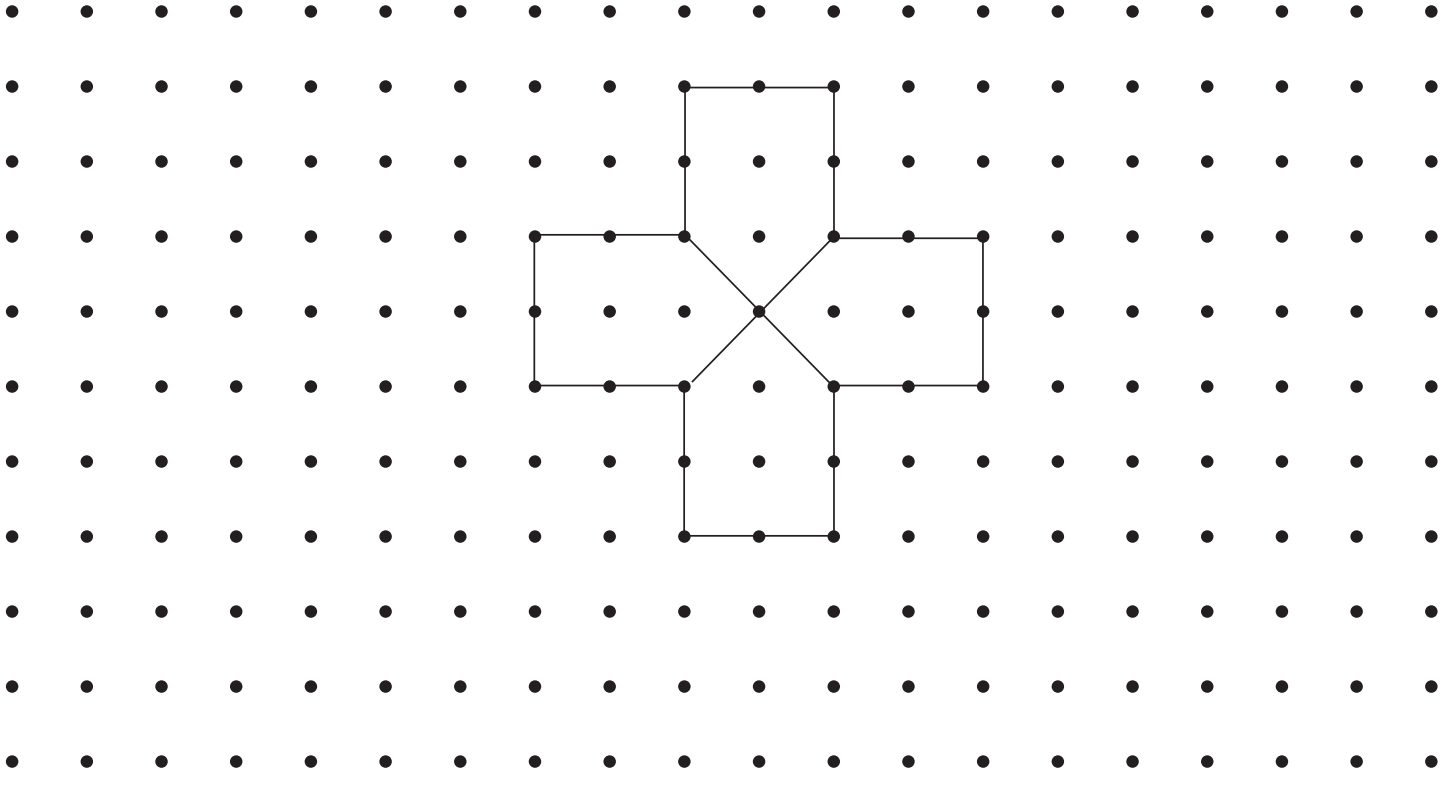


Complete each tessellation by adding 5 more unit shapes to it.

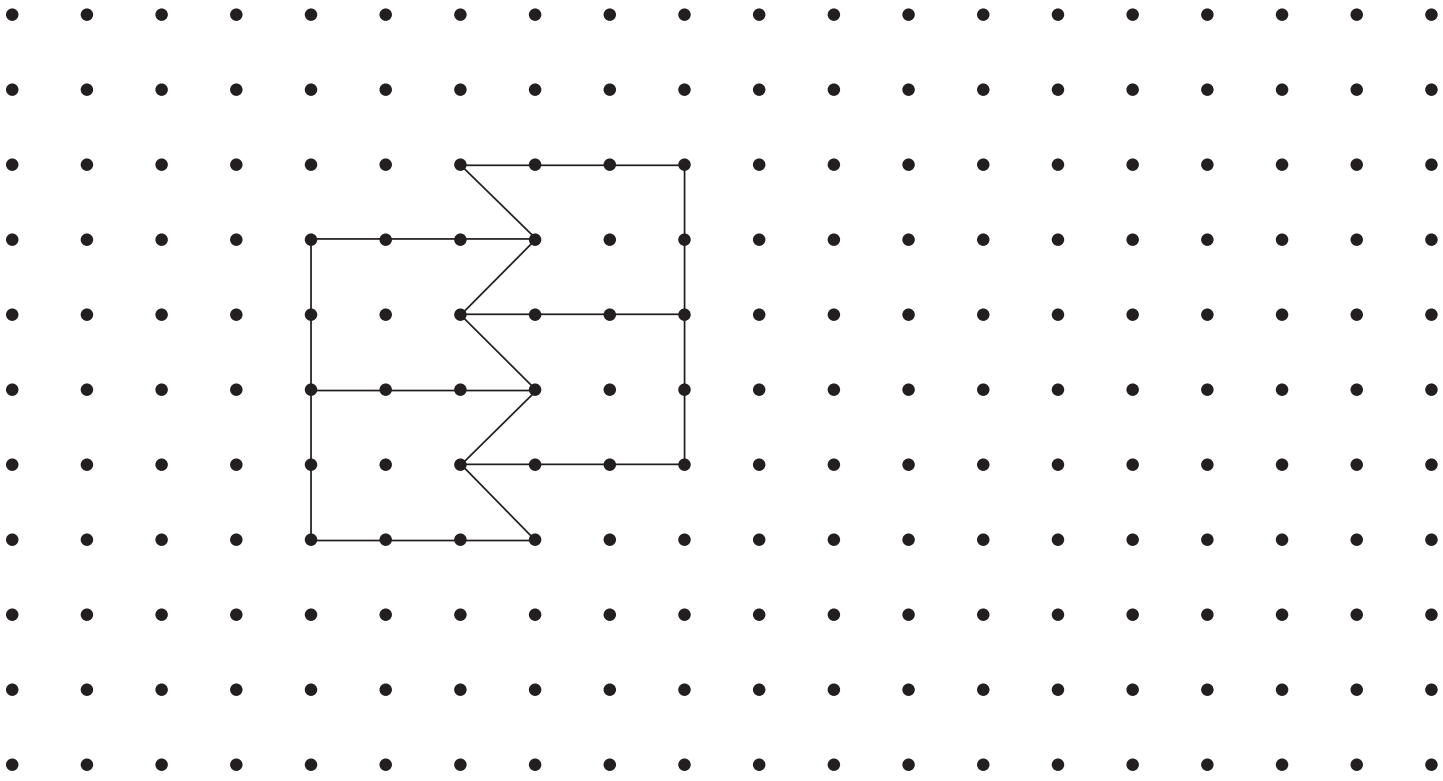
11.



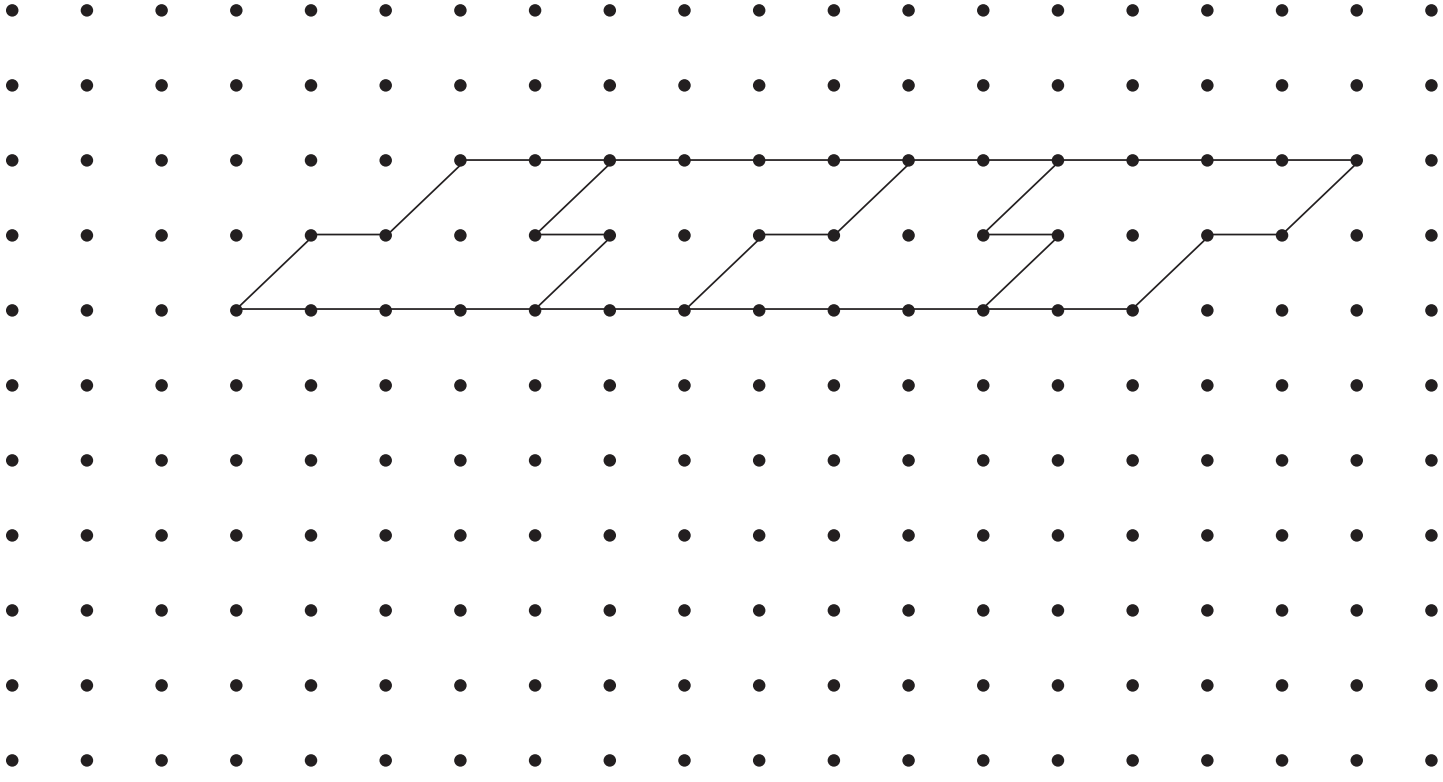
12.



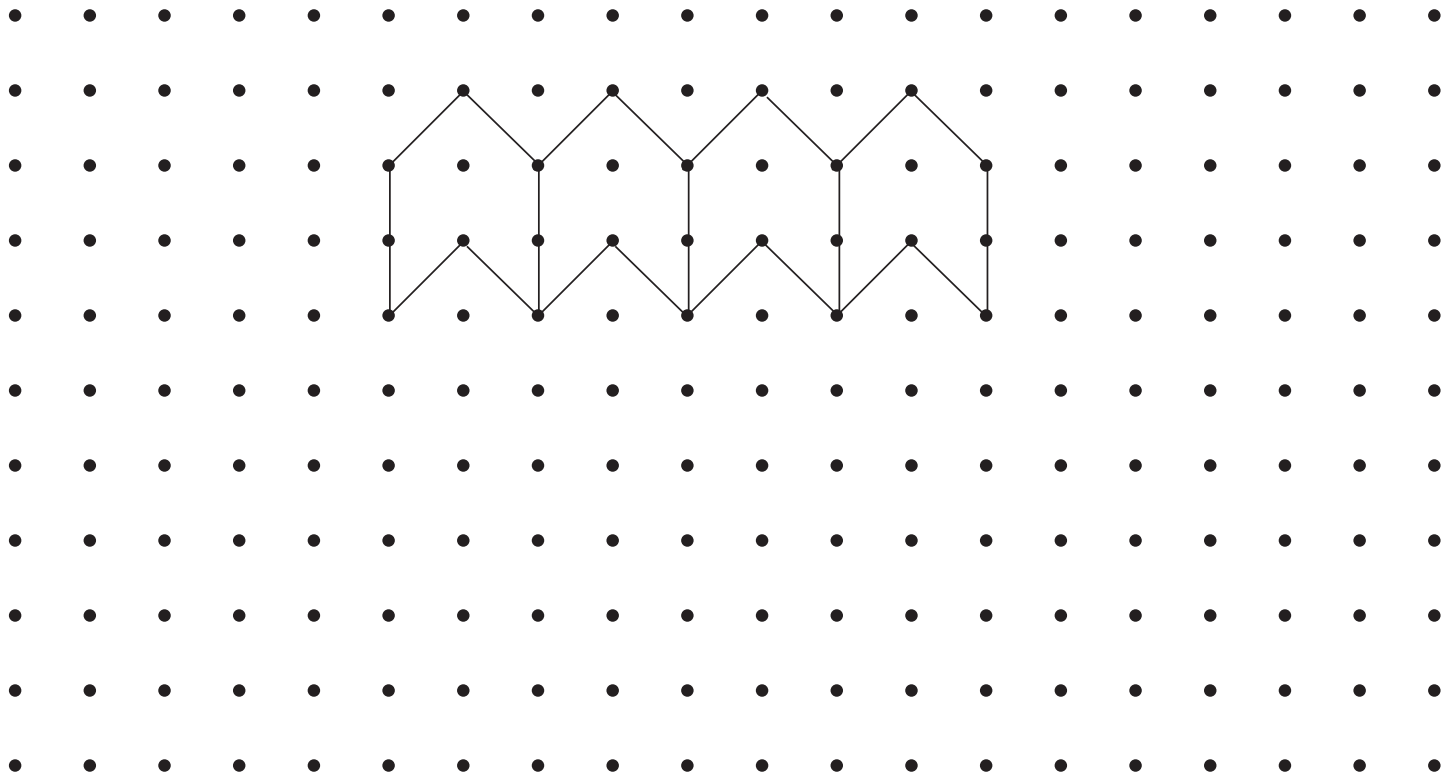
13.



14.

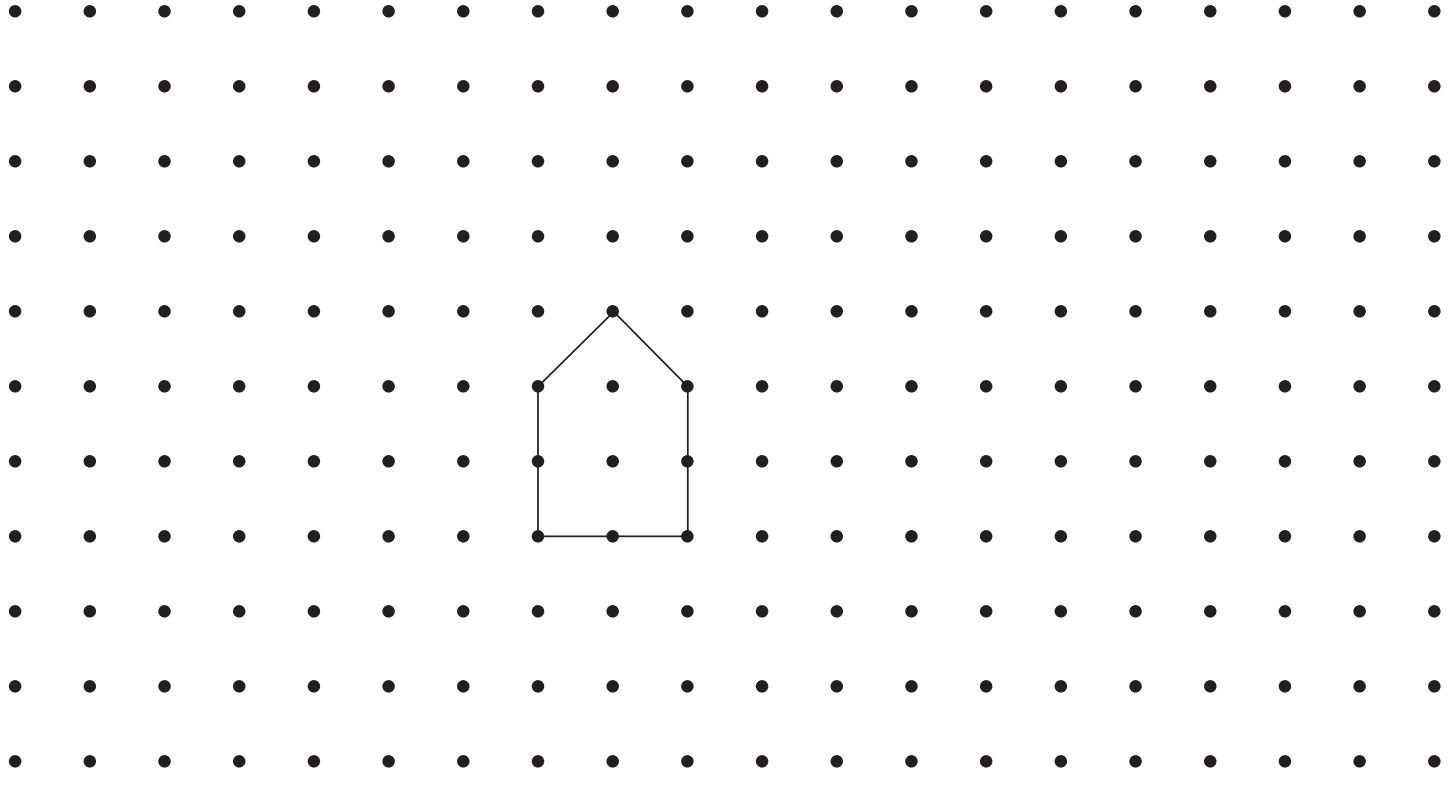


15.

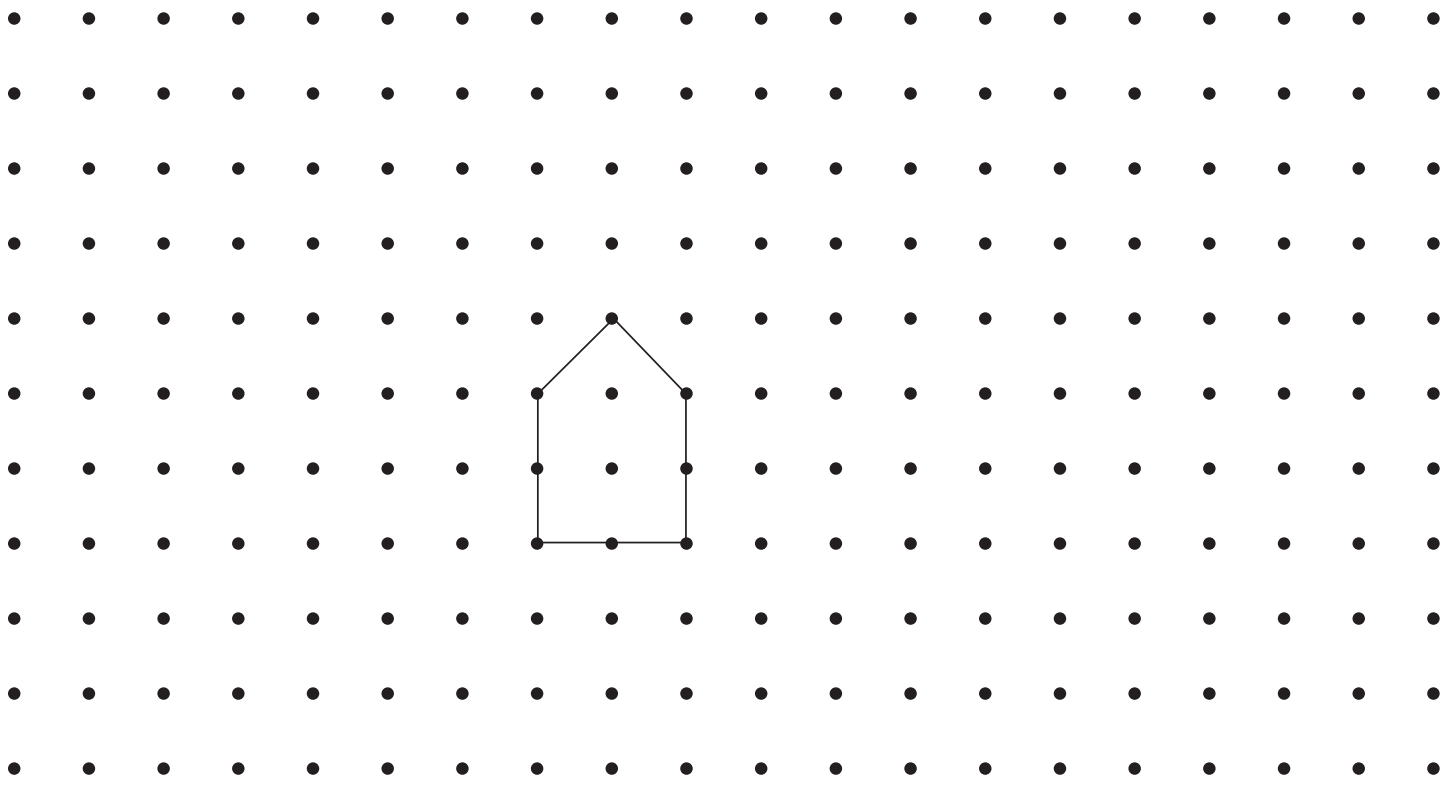


Draw the following shapes in 2 different tessellations. Add at least 5 more unit shapes.

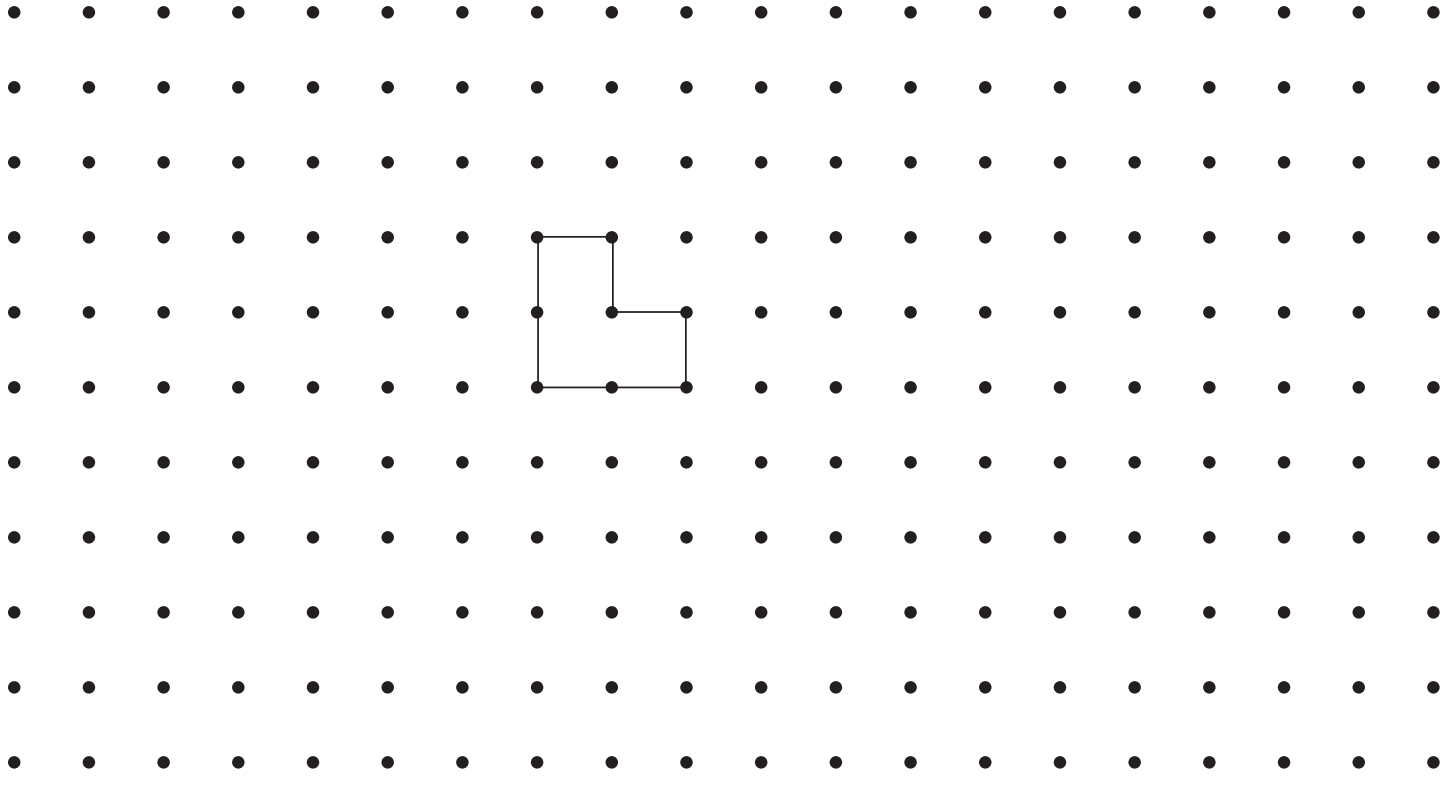
16. (a)



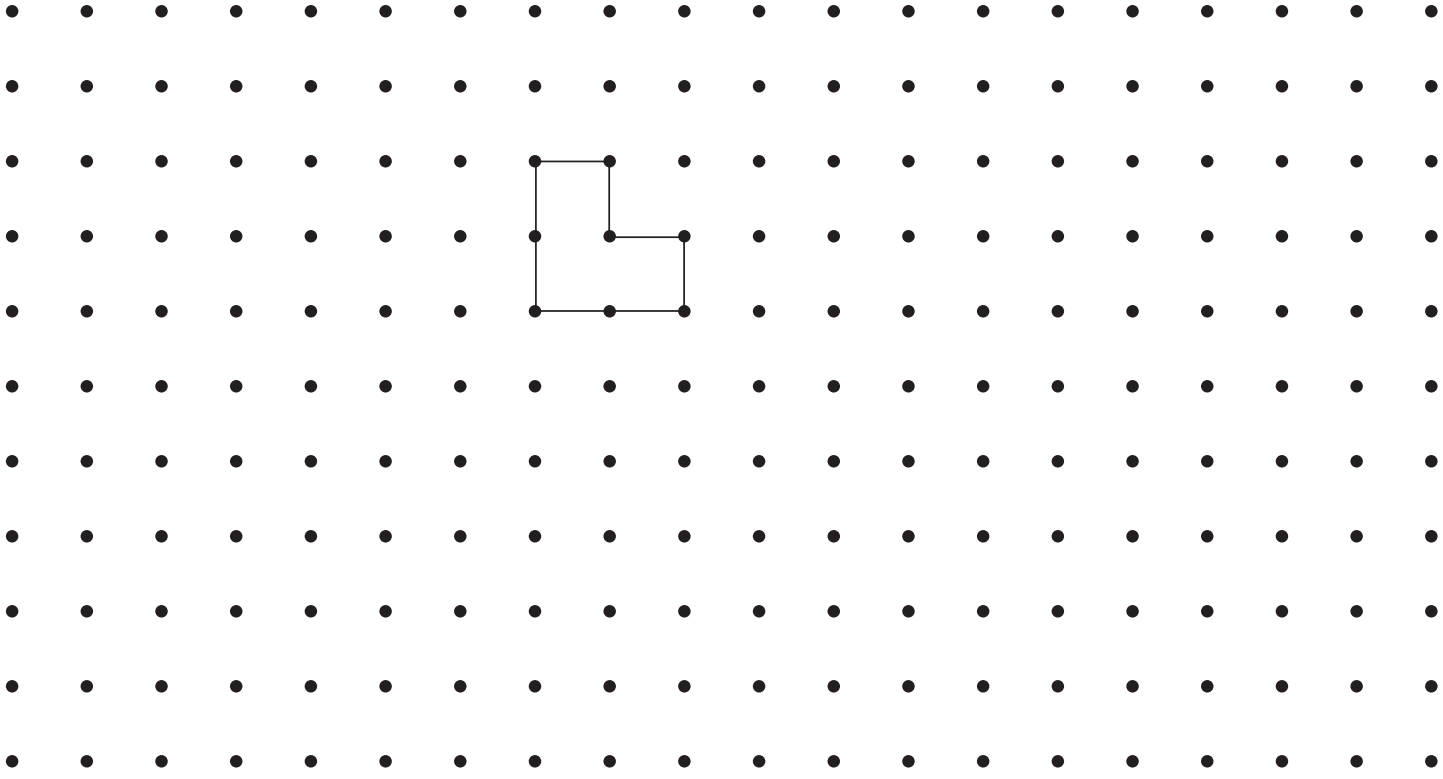
(b)



17. (a)



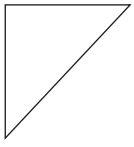
(b)

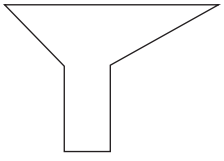


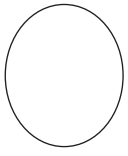
REVIEW 7

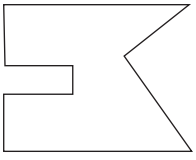
Choose the correct answer. Write its number in the parentheses.

1. Which of the following figures is symmetrical?

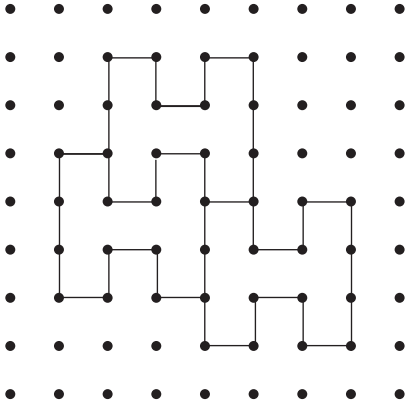
(1) 

(3) 

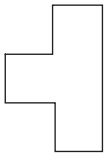
(2) 

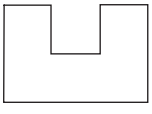
(4) 

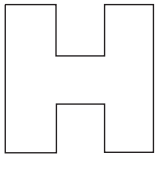
( )

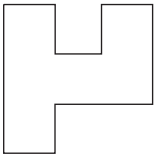
2. 

Which of the following shows the correct unit shape in the tessellation?

(1) 

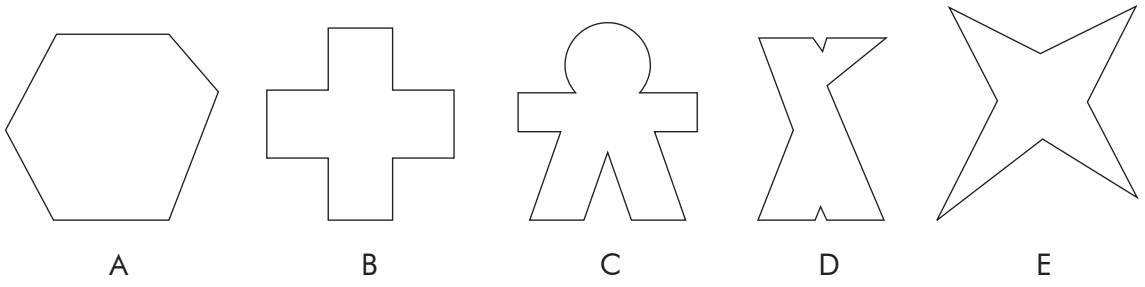
(3) 

(2) 

(4) 

( )

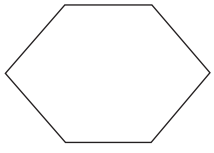
3. Which of the following figures are symmetrical?

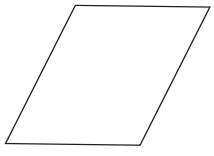


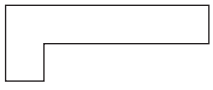
A B C D E

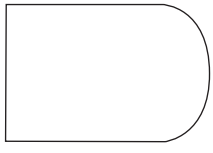
(1) A and C
(2) A and D
(3) B and C
(4) B and E ( )

4. Which of the following shapes cannot be tessellated?

(1) 

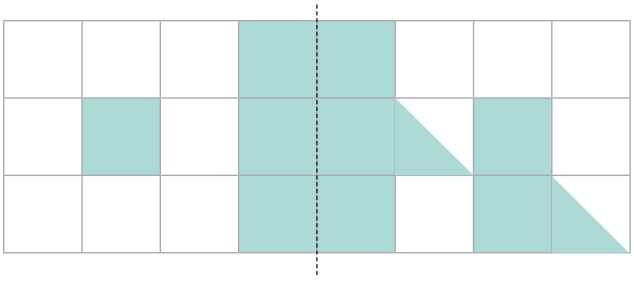
(2) 

(3) 

(4) 

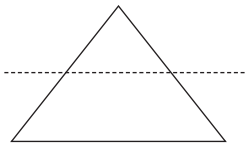
( )

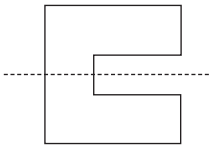
5. How many more squares must be shaded to make the figure below symmetrical? (2 right-angled triangles make up 1 square.)

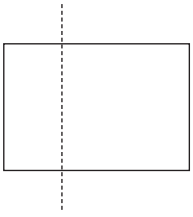


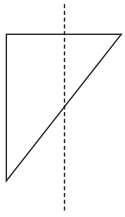
(1) 1
(2) 2
(3) 3
(4) 4 ( )

6. Which of the following shows the correct line of symmetry?

(1) 

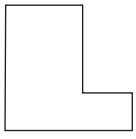
(3) 

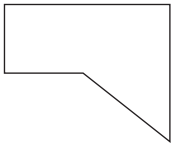
(2) 

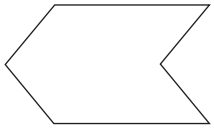
(4) 

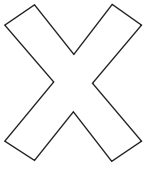
( )

7. Which of the following shapes can be tessellated?

(1) 

(3) 

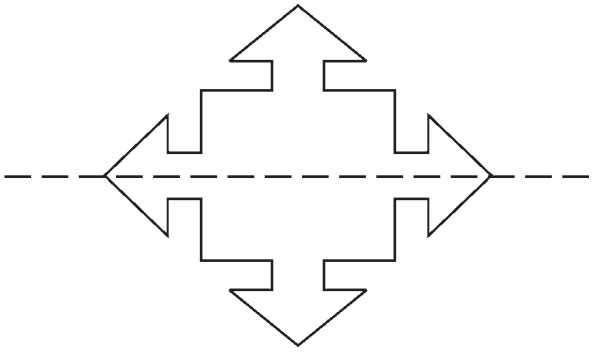
(2) 

(4) 

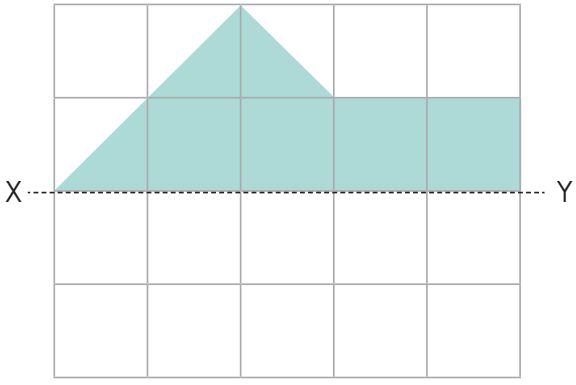
( )

Write your answers on the lines.

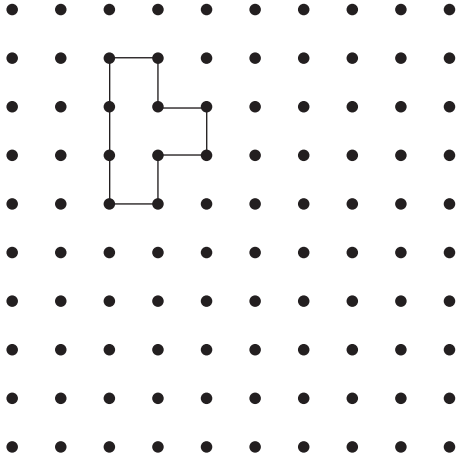
8. State if the dotted line is a line of symmetry.



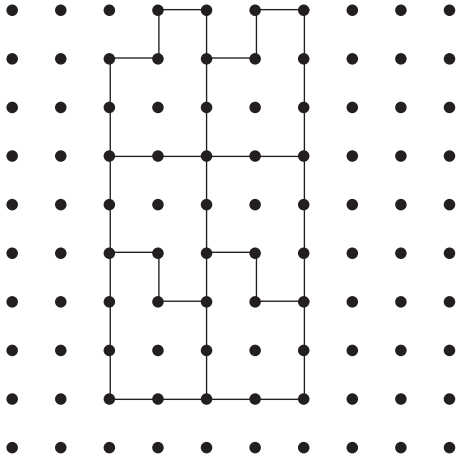
9. The figure below shows half of a symmetrical figure. Line XY is the line of symmetry. Complete the other half of the symmetrical figure.



10. Complete the tessellation by adding 5 more unit shapes to it.



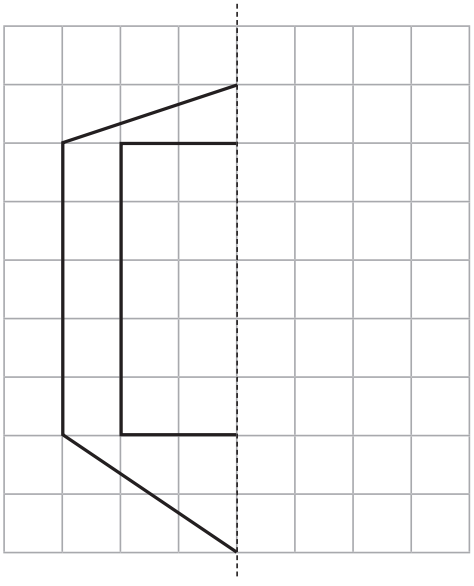
11. Identify the unit shape in the tessellation below by shading it.



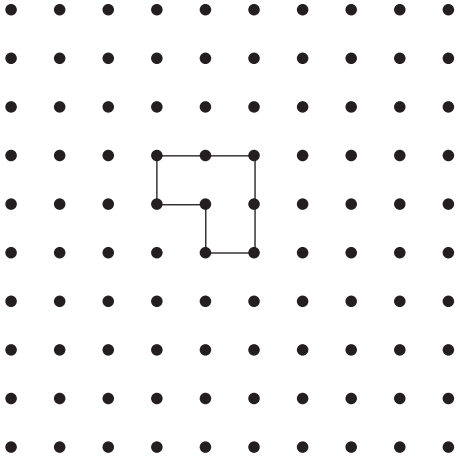
12. Is the figure below symmetrical?

_____

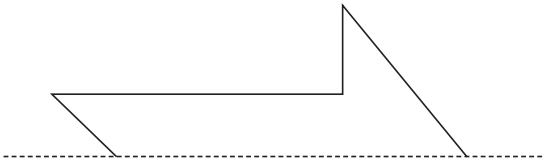
13. Complete the symmetrical figure.



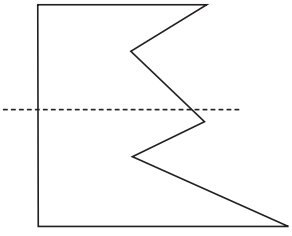
14. Complete the tessellation by adding 5 more unit shapes to it.



15. Complete the symmetrical figure.

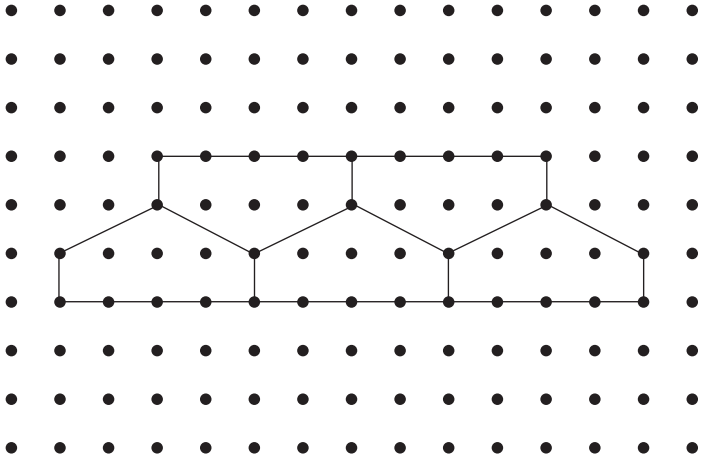


16. State if the dotted line is a line of symmetry.

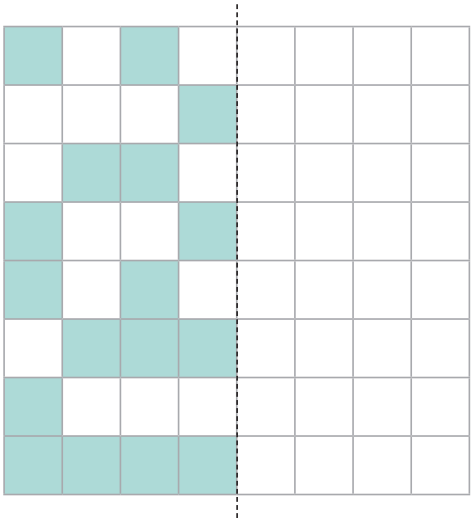


_____

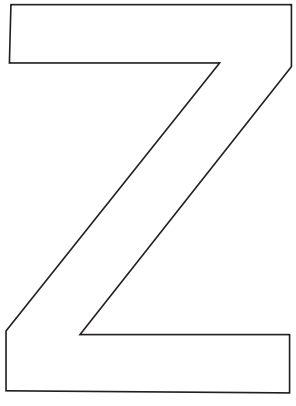
17. Identify the unit shape in the tessellation below by shading it.



18. Complete the symmetrical figure.

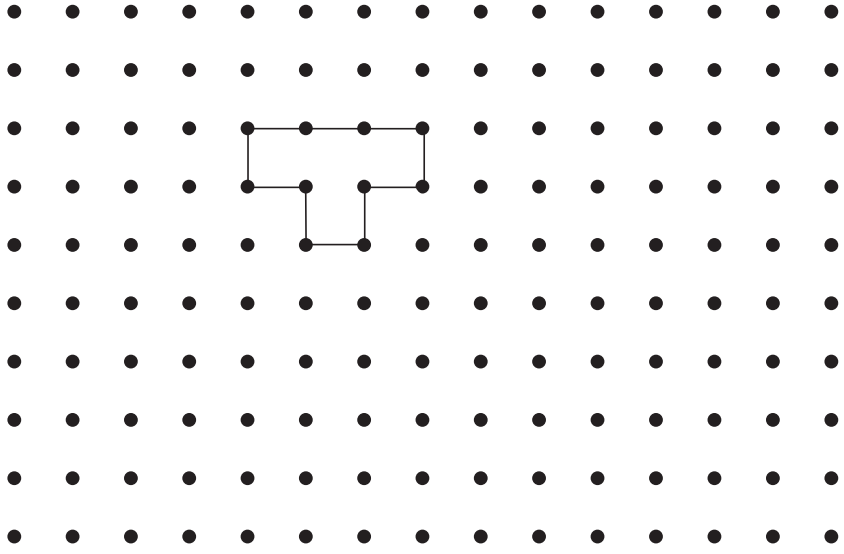


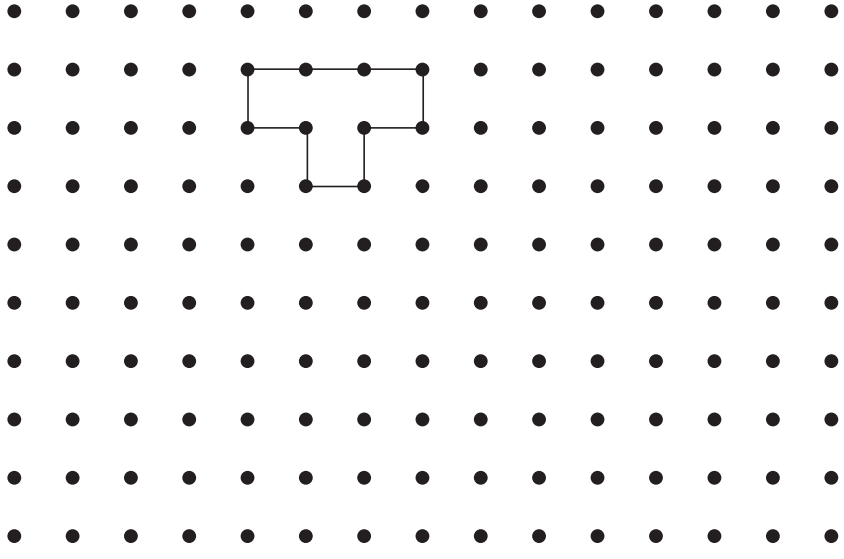
19. State if the letter 'Z' below is symmetrical.



Draw the following shape in 2 different tessellations. Add at least 5 more unit shapes.

20.





FINAL REVIEW

Choose the correct answer. Write its number in the parentheses.

1. The sum of 28.16 and 5.09 is _____.

   (1) 32.25 (3) 33.25

   (2) 33.16 (4) 34.06 ( )

2. The length of a rope is 5 m when rounded to the nearest meter. Which of the following is the original length of the rope?

   (1) 4 m 40 cm (3) 5 m 50 cm

   (2) 4 m 60 cm (4) 5 m 60 cm ( )

3. Johnny looked at the clock when he was washing his hands. The second hand moved from 3 to 8. He then stopped washing his hands. How long did he wash his hands?

   (1) 5 sec. (3) 25 sec.

   (2) 15 sec. (4) 35 sec. ( )

4. Which of the following numbers is symmetrical?

   (1) 3 (3) 5

   (2) 4 (4) 6 ( )

5. 8.604 = 8 + 0.6 + _____

   (1) 4 (3) 0.04

   (2) 0.4 (4) 0.004 ( )

6. Write the time one seventeen and forty-two seconds in the morning.

   (1) 0117:42 (3) 1.17:42 A.M.

   (2) 1:17:42 A.M. (4) 01:17.42 ( )

7. Write 4 tens, 15 tenths, and 3 hundredths in numerals.

(1) 4.153
(2) 40.153
(3) 40.18
(4) 41.53 ( )

8. $21.04 = 21 + \frac{4}{\square}$. What should be the correct answer in the box?

(1) 1
(2) 10
(3) 100
(4) 1000 ( )

9. The perimeter of a square is 64 in. Find its length.

(1) 8 in.
(2) 16 in.
(3) 18 in.
(4) 32 in. ( )

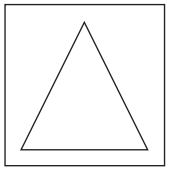
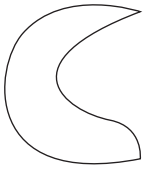
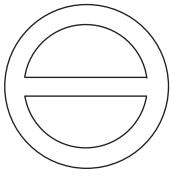
10. Express 405 hundredths as a decimal.

(1) 0.405
(2) 4.05
(3) 40.5
(4) 400.5 ( )

11. The product of 93.28 and 8 is _____.

(1) 11.66
(2) 85.28
(3) 101.28
(4) 746.24 ( )

12. Which of the following figures below is **not** symmetrical?

(1) 
(2) 
(3) 
(4) 

( )

13. Fiona watched a cartoon at 7:30 P.M. If the cartoon ended at 9:10 P.M., how long was the cartoon?

(1) 1 hr. 20 min.
(2) 1 hr. 40 min.
(3) 2 hr. 10 min.
(4) 2 hr. 20 min. ( )

14. Lisa bought 5.4 kg of sugar. She packed the sugar equally into 4 bags. What was the mass of each bag of sugar?

(1) 1.26 kg
(2) 1.35 kg
(3) 9.4 kg
(4) 21.6 kg ( )

15. Mrs. Volkmer sold 100 cookies. She sold them at $2.05 for 10 cookies. How much money did she collect from selling the cookies?

(1) $20.50
(2) $25
(3) $200.50
(4) $205 ( )

16. Ben took 18.35 sec. to complete a 100-yard race. Daniel finished the race 3.2 sec. faster than Ben. How long did Daniel take to finish the race?

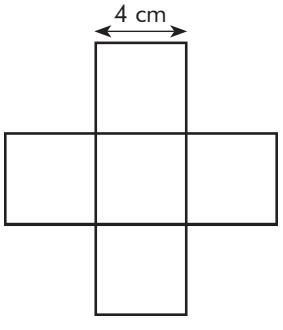
(1) 15.15 sec.
(2) 15.33 sec.
(3) 18.07 sec.
(4) 21.55 sec. ( )

17. The perimeter of a square is 20 ft. Find its area.

(1) 16 ft.^{2}
(2) 25 ft.^{2}
(3) 80 ft.^{2}
(4) 400 ft.^{2} ( )

18. The figure, not drawn to scale, is made up of 5 similar squares. Find its perimeter.

(1) 16 cm
(2) 32 cm
(3) 48 cm
(4) 80 cm



( )

19. Which of the following decimals is 10 when rounding to the nearest whole number?

(1) 9.09 (3) 10.5

(2) 9.9 (4) 10.9 ( )

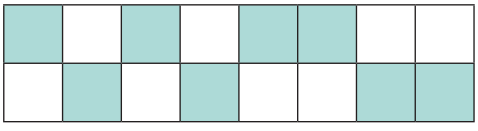
20. In 805.139, which digit is in the thousandths place?

(1) 3 (3) 8

(2) 5 (4) 9 ( )

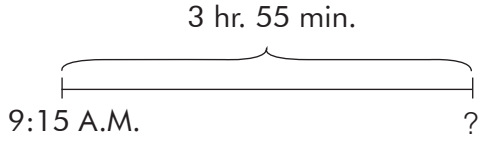
Write your answers on the lines.

21. The shaded parts represent the decimal. Write down the correct decimal.



_____

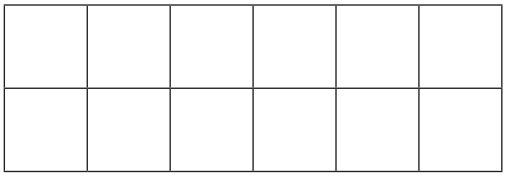
22. Tomas reached the library at 9:15 A.M. He stayed there for 3 hr. 55 min. At what time did he leave the library?



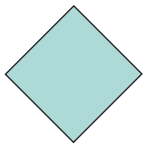
_____

23. Express $\frac{4}{5}$ as a decimal. _____

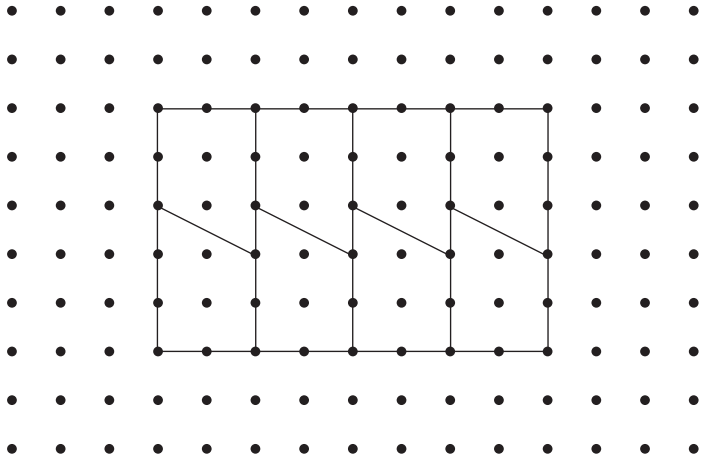
24. Shade 0.25 of the figure below.



25. State if the shape below is symmetrical.



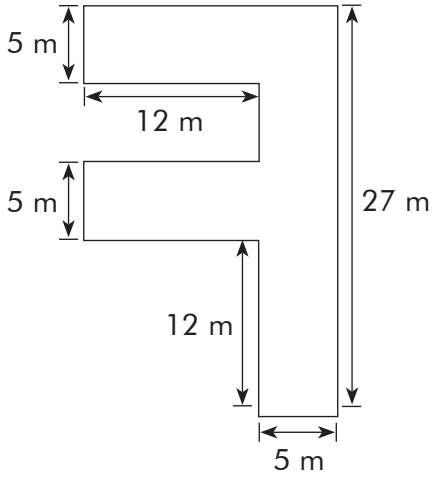
26. Identify the unit shape in the tessellation below by shading it.



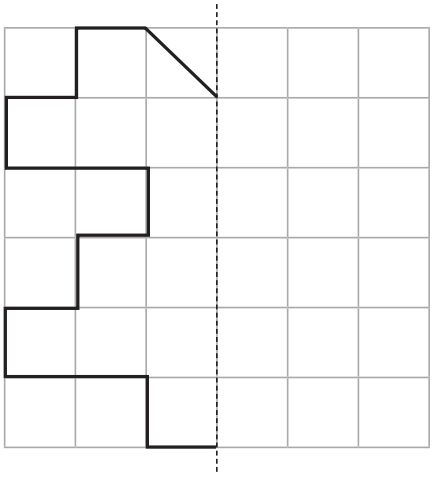
27. Arrange the decimals in descending order.

7.8 0.78 7.08

28. The figure below is made up of three rectangles. Find its area.



29. Complete the symmetrical figure.



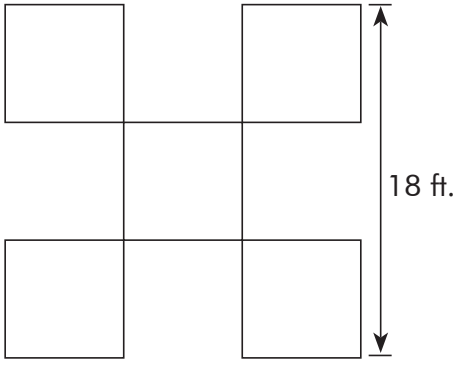
30. Estimate the value of 41.8 ÷ 6.

_____

31. A clock shows 4:40 P.M. If the clock is 45 minutes slow, write the correct time.

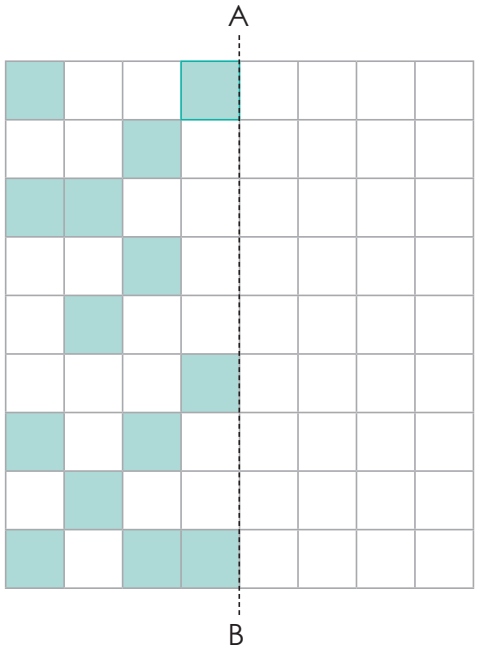
_____

32. The figure is made up of 5 squares. Find its area.



_____

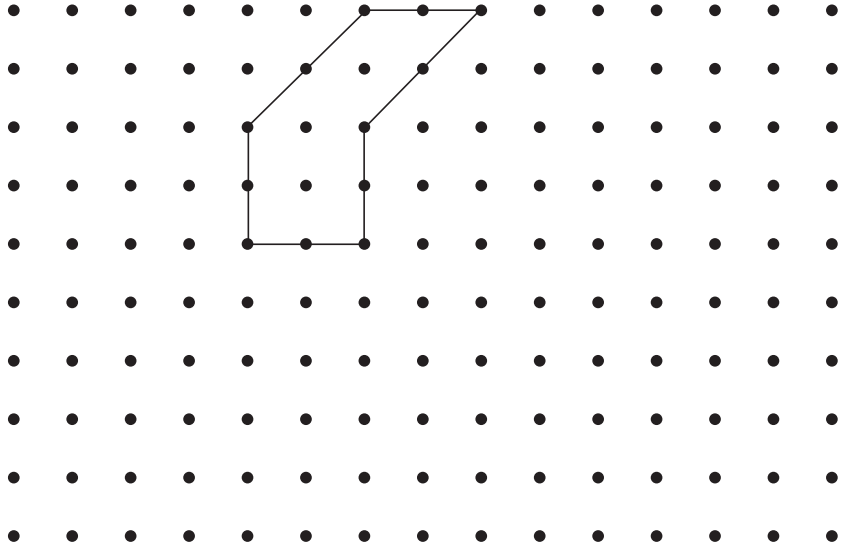
33. Complete the symmetrical pattern below using Line AB as the line of symmetry.



34. Rudy poured 9 gallons of syrup into 5 bottles equally. How much syrup was there in each bottle?

_____

35. Complete the tessellation below by adding 5 more unit shapes.

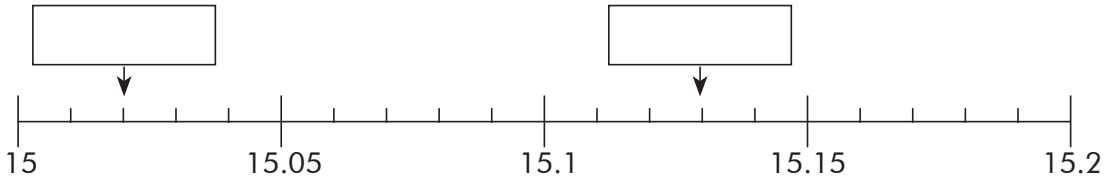


36. A garden has an area of 96 yd.^{2}. Its width is 6 yd. Find its perimeter.

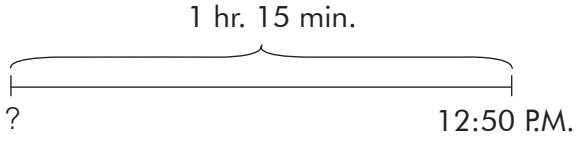
_____

37. In 127.04, the digit 0 is in the ☐ place. _____

38. Fill in each box with the correct decimal.



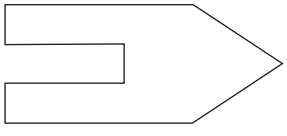
39.



Cara got off the bus at 12:50 P.M. If the trip took 1 hr. 15 min., at what time did she board the bus?

_____

40. State if the unit shape below can be tessellated.



_____

Solve the following story problems. Show your work in the space below.

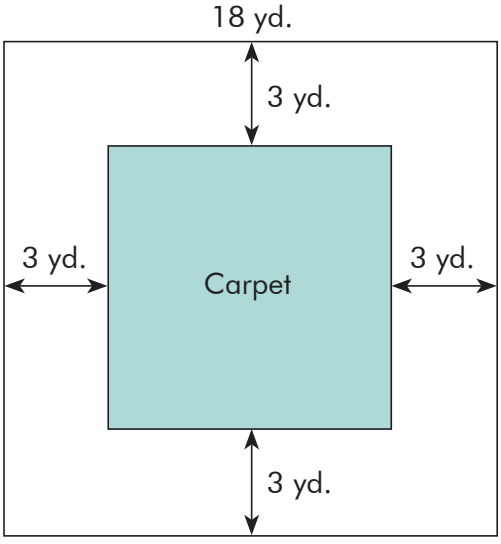
41. Mrs. Brown bought 13 lb. of meat. Each pound of meat cost $9.65. She gave the cashier $150. How much change did she receive?

42. A bus left Townsville at 7:05 P.M. It traveled for 3 hr. 40 min. and stopped for a rest. The bus continued the journey and reached Garden Town at 3:30 A.M. If the second part of the journey was 4 hr. 10 min., how long did it stop for a rest?

43. To make a bottle of fruit punch, 0.84 L of orange juice, 0.47 L of ginger ale, and 0.65 L of pineapple juice are needed. How many liters of fruit punch are there in a dozen bottles?

44. Charlene used 1.6 m of ribbon to tie a large present. She used another 95 cm of ribbon to tie a small present. If she had 5 m of ribbon in the beginning, how many meters of ribbon did she have left?

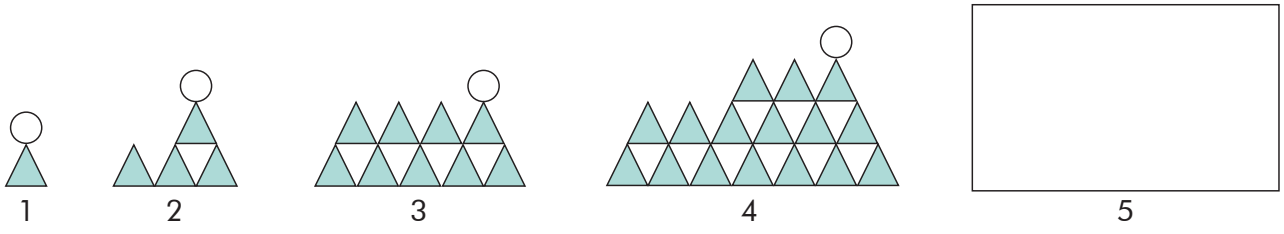
45. A carpet is placed in the middle of a square hall as shown below. What is the total cost of the carpet if it costs \$19 per yd.^{2}?



CHALLENGE QUESTIONS

Solve the following problems on another sheet of paper.

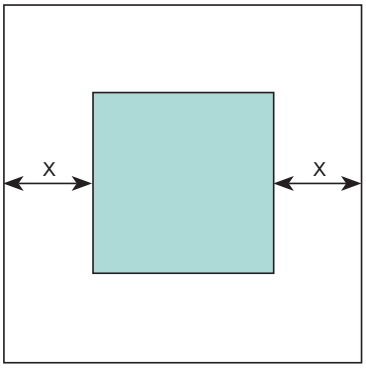
1. Study the pattern carefully and draw the correct shape in the given box.



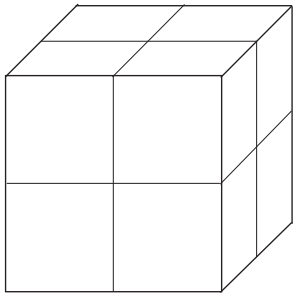
2. A group of students were told that they would have their afternoon break when the hour hand and minute hand formed a right angle on the clock. If the minute hand pointed to 12, what was the time of their afternoon break?

3. Two similar television sets and one DVD player cost $919.70.
One television set and two similar DVD players cost $639.70.
How much do three television sets cost?

4. The area of the bigger square is 576 in.^{2}. The area of the shaded square is 144 in.^{2}. Find the length of x.

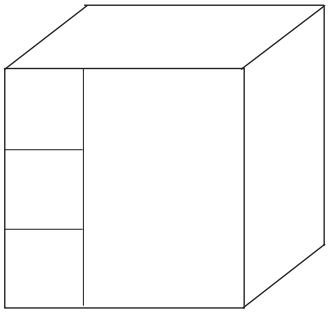


5. Several 3-cm cubes are arranged to form a solid as shown below. Find the total perimeter of all the faces of the solid.



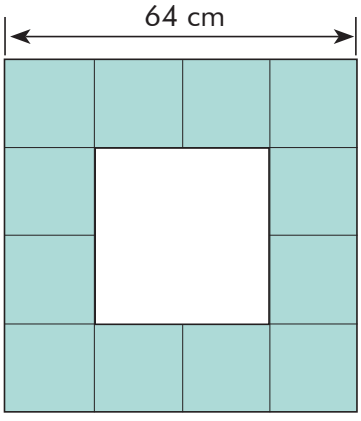
6. Mrs. Munoz sold three times as much lemon tea on Saturday than on Monday. She sold 5 times as much lemon tea on Sunday than on Monday. If Mrs. Munoz sold 2 liters 600 milliliters more of lemon tea on Sunday than on Saturday, how much lemon tea did Mrs. Munoz sell over the weekend?

7. How many 1-in. cubes are needed to make this 3-in. solid?



8. Three similar books and two similar dictionaries cost $85.50.
One book and one dictionary cost $37.80.
How much is each book?

9. The length of the bigger square is 64 cm. Find the area of the unshaded square.



10. Circle the letter(s) that is/are **not** symmetrical.

A S V M K

11. How many 5-cm cubes are needed to form a solid of 3,125 cm^3?

12. Keith took an hour to paint 5 similar chairs. If he worked 8 hours a day, how many days did he use to paint 120 similar chairs?