

VIRGINIA STANDARDS OF LEARNING

Spring 2009 Released Test

GRADE 5 MATHEMATICS

Form M0119, CORE 1

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Directions

Read each question and choose the best answer.

SAMPLE

What is 17 rounded to the nearest ten?

- A** 10
- B** 15
- C** 20
- D** 25

1 **$6.48 \div 4 =$**

- A** 0.162
- B** 1.62
- C** 16.2
- D** 162

2 Last year, Linda scored at least 16 points in every basketball game in which she played. She played in a total of 13 games last year. What is the least number of points she could have scored last year?

- F** 29
- G** 108
- H** 164
- J** 208

3 What is the sum of $3\frac{1}{4}$ and $3\frac{1}{3}$?

- A** $6\frac{1}{12}$
- B** $6\frac{2}{7}$
- C** $6\frac{7}{12}$
- D** 7

4 A group planted 3,619 flowers last year. This year, they planted 2,485 flowers. How many more flowers did the group plant last year than this year?

F 1,124

G 1,134

H 1,274

J 6,104

5 A male Siberian tiger is 3.3 meters long. A female Siberian tiger is 2.6 meters long. What is the difference in these lengths?

A 0.7 meter

B 1.3 meters

C 1.7 meters

D 5.9 meters

6 $846 \div 7 =$

F 121 R1

G 120 R6

H 112 R2

J 12 R6

7 **31.514**
 — **24.607**

- A 6.907
- B 6.913
- C 7.107
- D 7.113

8 Mrs. Burns gives her 4 children a total of \$60 per week for their allowance. How much money should each child receive if they share the \$60 equally?

- F \$10
- G \$15
- H \$24
- J \$30

9 $\frac{1}{2} - \frac{1}{3} =$

- A $\frac{0}{1}$
- B $\frac{1}{6}$
- C $\frac{2}{5}$
- D $\frac{5}{6}$

10 $20 \overline{)8460}$

- F** 42 R6
- G** 402 R6
- H** 403
- J** 423

11 $0.505 + 0.314$ is *closest to* —

- A** 0.6
- B** 0.7
- C** 0.8
- D** 0.9

12 The first week a printer was used, it produced 34,581 pages. The next week the printer produced 40,586 pages. What was the total number of pages the printer produced in these two weeks?

- F** 6,005
- G** 14,005
- H** 75,167
- J** 85,167

**Do not turn
the page until
you are told.**



13 Which set of fractions is ordered from *least to greatest*?

A $\frac{1}{4}, \frac{1}{3}, \frac{1}{2}, \frac{3}{4}$

B $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{3}{4}$

C $\frac{1}{3}, \frac{1}{2}, \frac{3}{4}, \frac{1}{4}$

D $\frac{3}{4}, \frac{1}{4}, \frac{1}{3}, \frac{1}{2}$

14 What is the place value of the 7 in 594.237 ?

F Ones

G Tenths

H Hundredths

J Thousandths

15 How is 0.372 written in words?

- A** Three hundred seventy-two thousandths
- B** Three and seventy-two thousandths
- C** Three hundred seventy-two hundredths
- D** Three hundred seventy-two

16 Which decimal below has the same value as $\frac{6}{10}$?

- F** 6.10
- G** 6.0
- H** 0.6
- J** 0.06

17 Which number is two hundred and three thousandths?

- A** 200.003
- B** 200.03
- C** 200.3
- D** 203.000

18 Which is a true statement?

F $1.327 > 1.618$

G $1.443 < 1.389$

H $1.536 > 1.254$

J $1.712 < 1.563$

19 What is the value of the digit 5 in 1.59 ?

A 5 tenths

B 5 ones

C 5 tens

D 5 hundredths

20 When rounded to the nearest tenth, which of the following decimal numbers would round to 9.6 ?

F 9.52

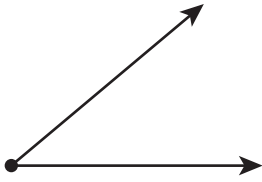
G 9.56

H 9.67

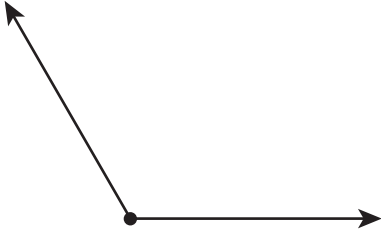
J 9.69

21 Which angle measures *closest* to 41° ?

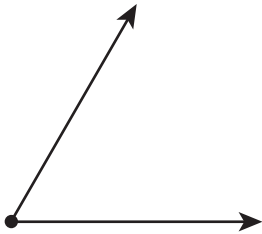
A



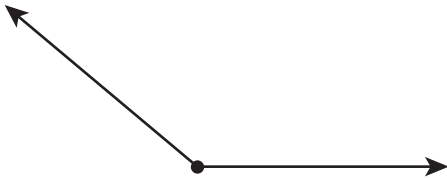
B



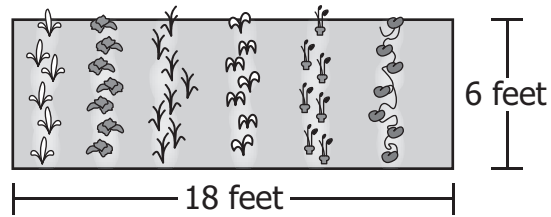
C



D

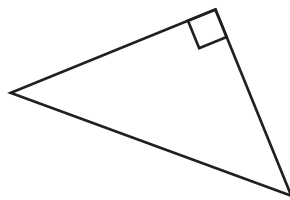


- 22 The picture shows a rectangular garden Jerri and Samantha are planning for their science project. What is the perimeter of the garden?



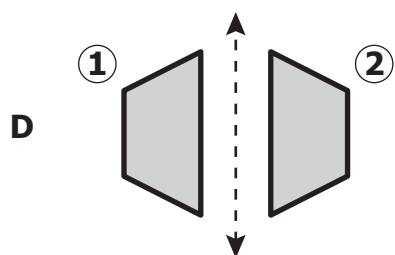
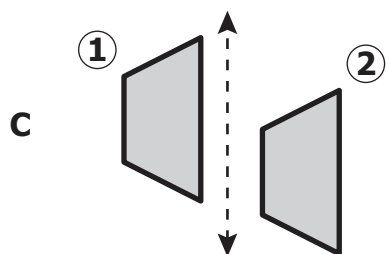
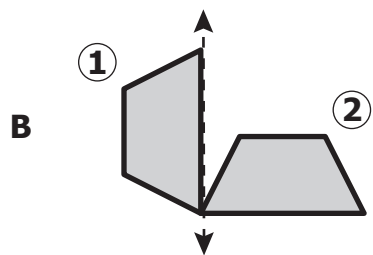
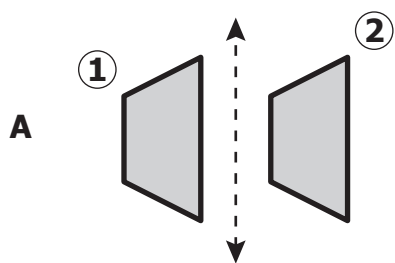
- F** 108 ft
G 48 ft
H 24 ft
J 12 ft
- 23 Anita and her family drove to Virginia Beach. They left home at 9:15 a.m. They arrived at Virginia Beach at 5:17 p.m. Which of the following is *closest* to the total time it took them to drive from home to Virginia Beach?
- A** 3 hours, 8 minutes
B 4 hours, 2 minutes
C 8 hours, 2 minutes
D 14 hours, 32 minutes

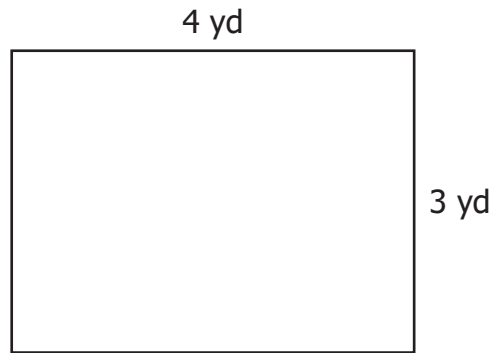
24 Which two types of angles are used to form this triangle?



- F Acute, obtuse
- G Acute, right
- H Obtuse, acute
- J Obtuse, right

25 In which picture is Figure 2 a reflection (flip) of Figure 1 across the dashed line?

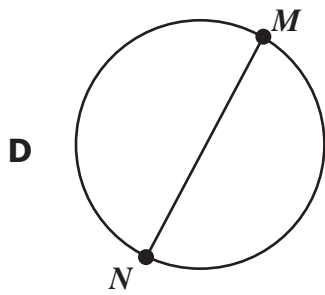
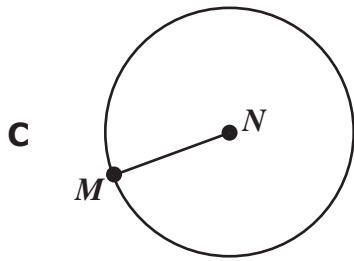
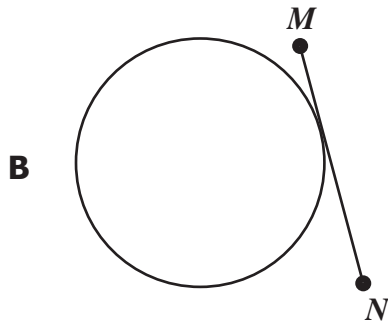
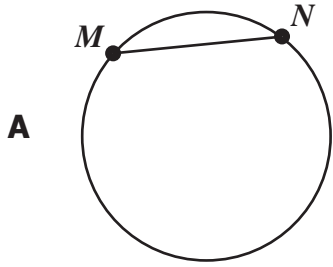




The area of the field shown in the picture is 12 —

- F** square inches
- G** pounds
- H** square yards
- J** meters

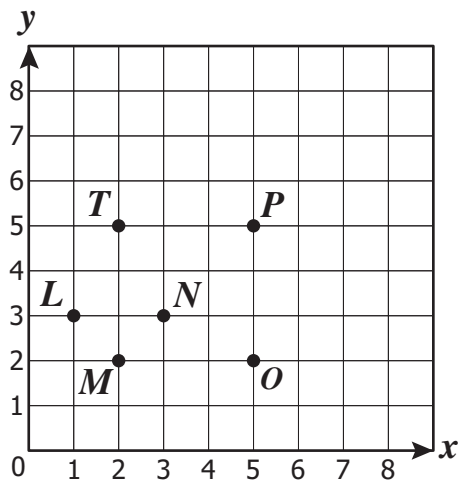
27 Which illustration *best* shows \overline{MN} as the radius of the circle?



28 Meghan measured the mass of an object in grams. Meghan *most likely* measured a —

- F car
- G chair
- H desk
- J pencil

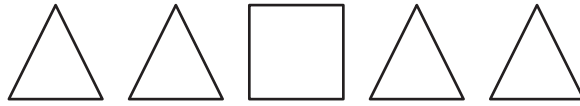
29 The picture shows six points on a grid.



Which three points can be connected to form a right angle?

- A Points T , L , and N
- B Points L , P , and T
- C Points N , O , and P
- D Points M , O , and P

30 The picture below shows all the faces of a solid.

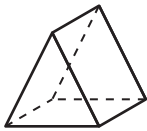


Which solid could be formed by the faces shown?

F



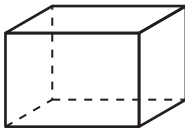
G



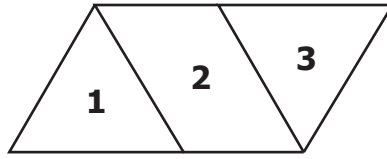
H



J



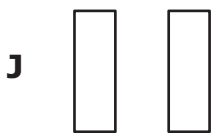
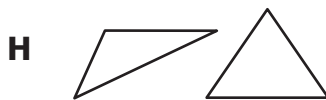
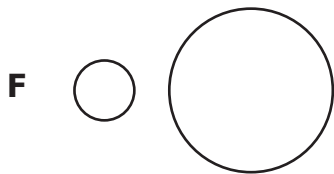
31



When section 3 is removed from the parallelogram shown, which of the following *best* describes the new figure?

- A Kite
- B Rhombus
- C Trapezoid
- D Rectangle

32 Which appears to show two congruent shapes?

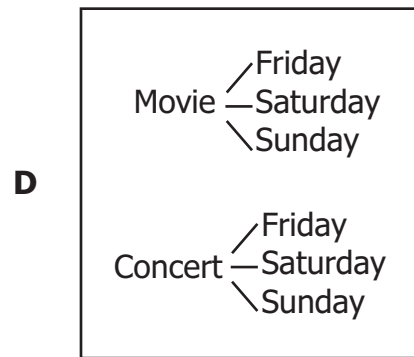
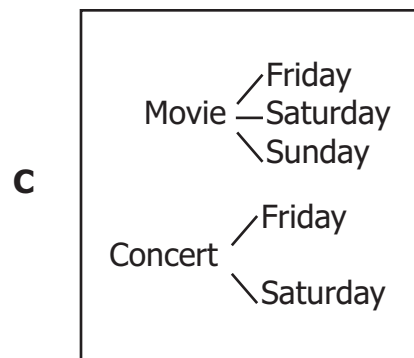
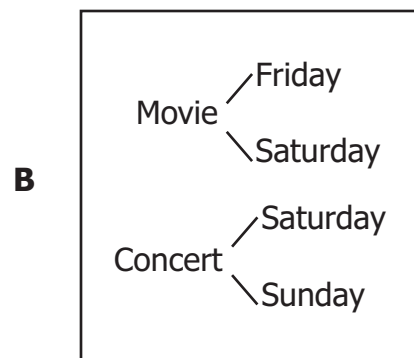
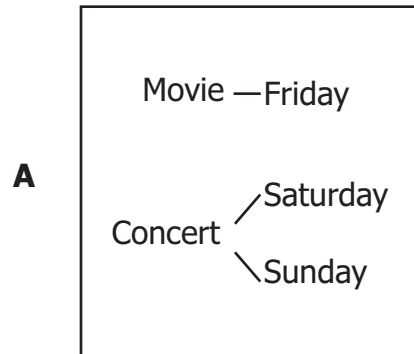


33 Joe wants to do something fun this weekend.

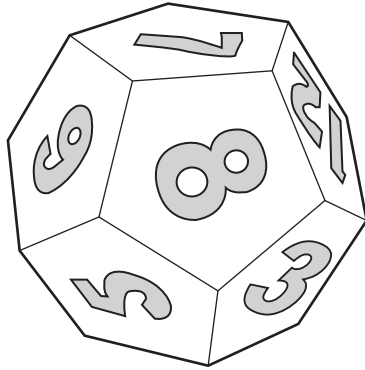
Weekend Options

Event	Day
Movie	Friday
Concert	Saturday
	Sunday

Which diagram shows all possible combinations Joe has if he picks 1 event and 1 day from the chart?



34 Celeste has a 12-sided solid with sides numbered 1 through 12.



What is the probability that she will roll a 4, 5, or 6 on the first roll?

F $\frac{3}{12}$

G $\frac{4}{12}$

H $\frac{5}{12}$

J $\frac{6}{12}$

- 35 The stem-and-leaf plot shows the grades some students in Mr. Castillo’s class earned on their last math quiz.

Grades on Math Quiz

Stem	Leaf
6	7, 8, 9
7	2, 2, 2, 3, 6, 9
8	3, 4, 4, 6
9	1, 8

Key: 8 | 4 means 84.

Based on data in the stem-and-leaf plot, what is the total number of students who earned a grade of 70 or higher on their last math quiz?

- A 3
- B 6
- C 9
- D 12

- 36 Mr. Copeland made a chart to display the number of each kind of prize he had in his prize box.

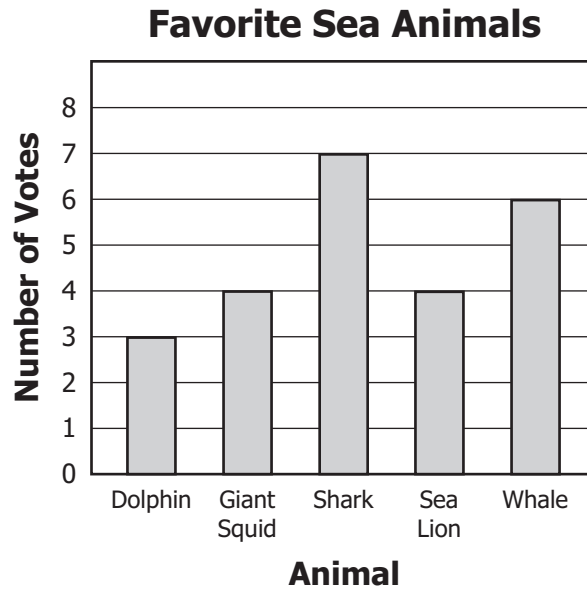
Prizes in the Prize Box

Kind of Prizes	Number
Balls	10
Puzzles	7
Lollipops	18
Poppers	15
Squirt rings	7
Stickers	21
Cars	6

What is the mode of the numbers in the chart?

- F** 7
- G** 10
- H** 12
- J** 15

37 Students in Mr. Malone’s class voted for their one favorite sea animal. The results are shown below.



The greatest difference in the number of votes received was between the —

- A Giant Squid and Shark
- B Sea Lion and Whale
- C Giant Squid and Whale
- D Dolphin and Shark

38 Pieces of paper numbered 1 through 31 are in a bag. Sal drew a piece of paper from the bag without looking. Which question could be answered using probability?

- F** How many odd numbers are written on the pieces of paper?
- G** Is the number Sal drew from the bag likely to be less than 10 ?
- H** How many pieces of paper are in the bag before any are drawn out?
- J** After Sal drew a piece of paper from the bag, how many pieces were left?

39 The chart shows the number of each color of counting chip Mr. Kellas placed in an empty box. All the chips were the same size and shape.

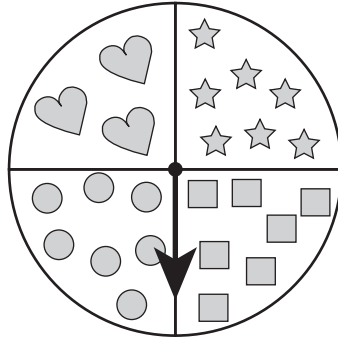
Counting Chips

Color	Number in Box
Red	6
Yellow	1
Green	2
Purple	6
White	1

Ross is going to take 4 counting chips out of the box without looking. Which combination of counting chips could Ross take from the box?

- A** 2 purple, 2 white
- B** 2 red, 2 yellow
- C** 1 white, 3 purple
- D** 3 green, 1 yellow

40 Peggy spins the arrow on the spinner shown.



What is the probability that the arrow will point to the section containing hearts on the first try?

- F 1 out of 3
- G 1 out of 4
- H 3 out of 4
- J 3 out of 24

41 Which of the following can be solved using the open sentence $s - 6 = ?$

- A Pablo has 6 more vacation days than Sandra. If s represents the number of vacation days Sandra has, how many vacation days does Pablo have?
- B Pablo has 6 times more vacation days than Sandra. If s represents the number of vacation days Sandra has, how many vacation days does Pablo have?
- C Pablo has 6 fewer vacation days than Sandra. If s represents the number of vacation days Sandra has, how many vacation days does Pablo have?
- D Sandra has 6 times more vacation days than Pablo. If s represents the number of vacation days Sandra has, how many vacation days does Pablo have?

42 Which represents the unknown value in the following statement?

$$d \div 2 = 11$$

- F** d
- G** \div
- H** 2
- J** 11

43 What is the missing number in the following numerical pattern?

9, 13, 17, 21, 25, ?, 33

- A** 27
- B** 29
- C** 31
- D** 37

- 44 A number machine uses a rule to change numbers. The table shows the results.









Number Machine Results

In (k)	Out (m)
2	14
5	17
7	19
11	23

Which could be the rule the number machine used?

- F $k \div 12 = m$
- G $k \times 12 = m$
- H $k - 12 = m$
- J $k + 12 = m$
-
- 45 Terry ate 3 fewer pretzels than Susan. If p represents the number of pretzels Susan ate, which could be used to determine the number of pretzels Terry ate?
- A $p + 3 = \square$
- B $p - 3 = \square$
- C $p \times 3 = \square$
- D $p \div 3 = \square$

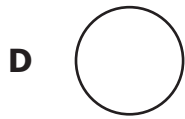
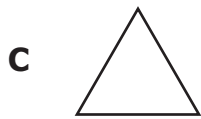
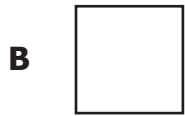
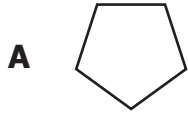
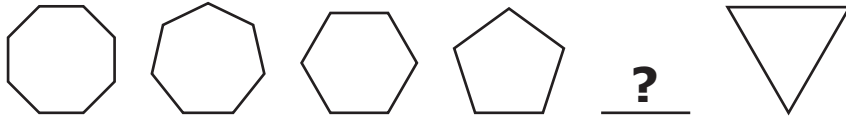
46 Paula and John played a number game. When Paula said a number, John used a rule to find the number he would reply. The pictures show what happened.

Paula said:	John replied:
	
	
	
	

Which of the following could be the rule John used?

- F Add 8
- G Add 50
- H Multiply by 3
- J Multiply by 5

47 What is the 5th shape in the pattern?



48 Nick is paid \$6.00 per hour, and last week he earned \$150.00. What does the x represent in the equation $6x = 150$?

- F The number of days Nick worked last week
- G The number of hours Nick worked last week
- H The number of days Nick worked last month
- J The number of hours Nick worked yesterday

49 William's age is 9 times Susan's age. If Susan's age is s , which expression best represents William's age?

- A** $9 \times s$
- B** $9 + s$
- C** $s - 9$
- D** $s \div 9$

50 Which of these could be solved by using the open sentence $6 + z = 12$?

- F** Fred caught 6 fish every day for 12 days. How many fish did he catch all together?
- G** Fred caught 6 fish before lunch. He caught 12 more after lunch. What was the total number of fish he caught?
- H** Fred caught 6 fish before lunch. He caught more fish after lunch. At the end of the day, he had 12 fish. How many fish did he catch after lunch?
- J** Fred caught 12 fish. He put them in 6 bags. If each bag had the same number of fish, how many fish were in each bag?



Answer Key-5072-M0119

Test Sequence Number	Correct Answer	Reporting Category	Reporting Category Description
1	B	002	Computation and Estimation
2	J	002	Computation and Estimation
3	C	002	Computation and Estimation
4	G	002	Computation and Estimation
5	A	002	Computation and Estimation
6	G	002	Computation and Estimation
7	A	002	Computation and Estimation
8	G	002	Computation and Estimation
9	B	002	Computation and Estimation
10	J	002	Computation and Estimation
11	C	002	Computation and Estimation
12	H	002	Computation and Estimation
13	A	001	Number and Number Sense
14	J	001	Number and Number Sense
15	A	001	Number and Number Sense
16	H	001	Number and Number Sense
17	A	001	Number and Number Sense
18	H	001	Number and Number Sense
19	A	001	Number and Number Sense
20	G	001	Number and Number Sense
21	A	003	Measurement and Geometry
22	G	003	Measurement and Geometry
23	C	003	Measurement and Geometry
24	G	003	Measurement and Geometry
25	D	003	Measurement and Geometry
26	H	003	Measurement and Geometry
27	C	003	Measurement and Geometry
28	J	003	Measurement and Geometry
29	D	003	Measurement and Geometry
30	F	003	Measurement and Geometry
31	C	003	Measurement and Geometry
32	J	003	Measurement and Geometry
33	D	004	Probability and Statistics
34	F	004	Probability and Statistics
35	D	004	Probability and Statistics
36	F	004	Probability and Statistics
37	D	004	Probability and Statistics
38	G	004	Probability and Statistics
39	C	004	Probability and Statistics
40	G	004	Probability and Statistics
41	C	005	Patterns, Functions, and Algebra
42	F	005	Patterns, Functions, and Algebra
43	B	005	Patterns, Functions, and Algebra
44	J	005	Patterns, Functions, and Algebra
45	B	005	Patterns, Functions, and Algebra
46	H	005	Patterns, Functions, and Algebra
47	B	005	Patterns, Functions, and Algebra
48	G	005	Patterns, Functions, and Algebra
49	A	005	Patterns, Functions, and Algebra
50	H	005	Patterns, Functions, and Algebra

Grade 5 Math, Core 1

If you get this many items correct:	Then your converted scale score is:
0	000
1	006
2	064
3	098
4	124
5	144
6	161
7	176
8	189
9	201
10	213
11	223
12	233
13	242
14	251
15	259
16	268
17	276
18	283
19	291
20	298
21	306
22	313
23	320
24	327
25	334
26	341
27	348
28	355
29	363
30	370
31	377
32	385
33	393
34	400
35	409
36	417
37	426
38	435
39	445
40	455
41	466
42	478
43	491
44	506
45	523
46	543
47	568
48	600
49	600
50	600

