

Title I Inventories

These inventories were compiled in Title I several years ago as a measuring tool to show growth. These inventories were designed with the intention that each grade level test be given at the beginning of the year as a pretest for concepts to be acquired during the year. **When given as a pretest it is essential that students understand that they are not expected to know most of the material. Tell the students to merely peruse the inventory to see if there are any questions they feel they would like to attempt.** Explain to the students that these same tests will be given again at the end of the year to show how much they have learned. Every box is aligned to one or more of the ASD Performance Standards for the particular grade level.

In the past few years non-Title schools have requested these inventories. As well as a measure of growth, these inventories have been used to guide instruction by identifying gaps in a student's mathematical understanding. To use it for this purpose, teachers have been giving the inventories from **previous grade levels**.

In this packet you will find: the inventories, the answer sheets for the inventories, the alignments to the ASD Performance Standards, and the grade level ASD Performance Standards. Also included is a grid on which a teacher may record the correct and incorrect answers for each question.

Math Inventory Assessment Administration

Grade 6

- Inventories may take about 1 hour to administer.
- You may choose to administer them one page at time.
- You may read the problem if it does not include “reading a number correctly”.
- You should not use any other questioning strategies.
- Please do not define any terms.
- Manipulatives should be provided.
- The inventories may be copied on overheads and read item by item to the whole class. This is particularly important in the primary grades but may extend to the intermediate grades, as needed.
- Teachers should score the inventories and correlate them to the standards so that they can focus their future instruction more precisely. A tally sheet is provided to help you highlight patterns across the class.
- *To guide instruction, use the previous grade’s inventory in the fall.* Some teachers administer grade level inventories in January, as well as in September and April; this can aid in keeping instruction focused upon the children’s needs.
- *To show growth, use the current grade level inventory in the fall and the spring.*

Grade 6 Math Inventory

Name _____
Date _____
Teacher _____

1. Circle all of the prime numbers.

7 2 1 8 21 99 19

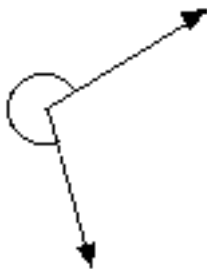
How do you know these are prime?

5. Complete the table.

Mixed number	Decimal	%
$1\frac{2}{5}$		
	4.75	
		380%

2. $\frac{2}{3}$ of 73 is about _____.

3. The measurement of this reflex angle is about _____ degrees.



6. The sub sandwich was 1.25 ft. long. San ate $\frac{2}{5}$ of it. Margo also ate $\frac{2}{5}$ of the sandwich. Kim ate the rest. How many inches long was Kim's piece of the sandwich?

_____ inches

4. Place these in order from least to greatest:
6, 5.05, 5.999, $6\frac{1}{2}$, $6\frac{1}{3}$

_____, _____, _____, _____, _____

7. Arrange these from least to greatest.

-46; 0.46; -4.6; 460; 4.6

Grade 6 Math Inventory

Solve each of the following.
Watch your signs!

Show your work in numbers
or pictures.

8. $3\frac{1}{3} + 2\frac{4}{5} =$

9. $3\frac{1}{3} - 1\frac{5}{6} =$

10. $2\frac{3}{4} \times 12 =$

11. $1\frac{2}{3} \div \frac{2}{3} =$

12. $6 + 1.5 =$

13. $6 - 1.5 =$

14. $6 \times 1.5 =$

15. $6 \div 1.5 =$

16. Total the scores of this Spreadsheet

	A	B	C	D	E	F
1						total
2		-6	3	2	-5	<input type="text"/>
3		4	5	-3	-1	<input type="text"/>
4		-2	1	-4	6	<input type="text"/>
5	total	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	XXXXX

17. 36 players tried out for the baseball team. 75% of the players made the team. How many players made the team?
(Show your work or explain how you figured it out mentally).

_____ players

18. Complete the functions, and write the rule.

	9
9	
	1
1	$\frac{1}{3}$
$\frac{1}{3}$	

rule

Grade 6 Math Inventory page 3

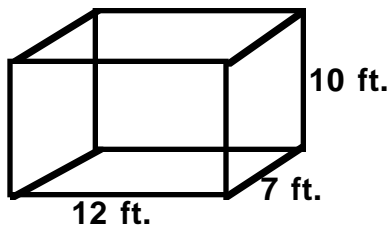
19. Give the name of the geometric solid that describes the shape of these items.

Coke can _____

Dice _____

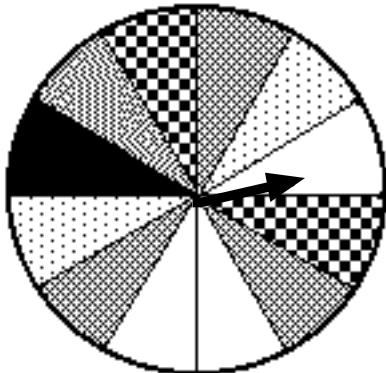
Globe _____

20. Compute the surface area and volume of this rectangular prism.



surface area _____ square ft.
 volume _____ cubic ft.

21. What is the probability the spinner will land on a plain white sector? _____

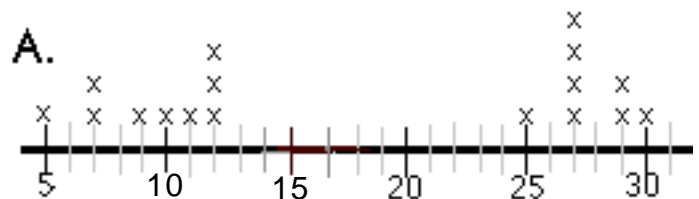


22. Michael can bake 12 batches of cookies in 3 hours. At this rate, how many batches can he bake in 5 hours? (Show your work in words or pictures.)

_____ batches

23. Circle the set of data that fits the landmarks below?

mean 18 median 12
 mode 27 range 25
 maximum 30 minimum 5



B.

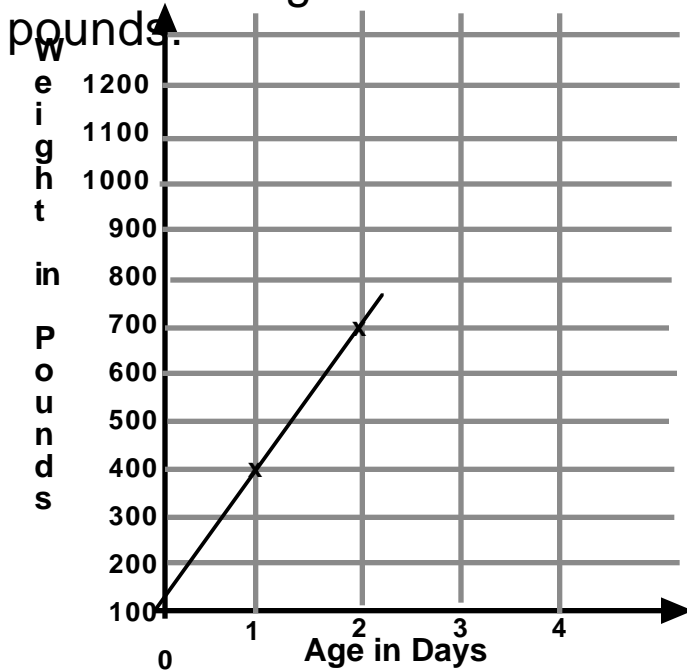
stems	leaves
0	5 7 7 9
1	0 1 2 3 3 4 4
2	5 6 6 7 7 7 7 9 9
3	0 2 2 2 4

C.

5	///
7	///
9	//
10	//
11	///
12	///
25	/
27	////
29	//
30	/

Grade 6 Math Inventory

24. A young blue whale can gain as much as 300 pounds per day. Continue the graph to predict how old a young blue whale would be when he weighed 1050 pounds.



26. Solve this number sentence. Remember your rules of order for operations. (Please excuse my dear Aunt Sally).

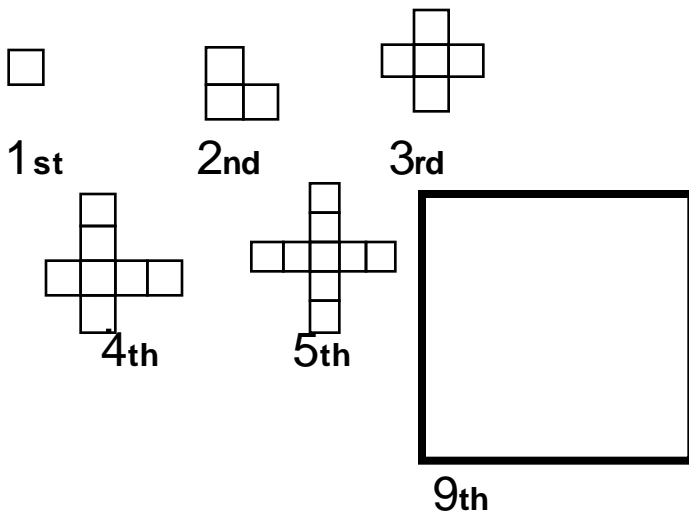
$$6 + (50 \div 2) \times 8 + 4^3 =$$

27. Write this in exponential form.

$$6 \times 6 \times 6 \times 6 \times 6 =$$

28. Use your favorite method to solve 7463 divided by 25. (Show your work or explain your method if you solved this mentally.)

25. Draw the ninth pattern in the box.



Grade 6 Math Inventory

29. Juan is m years older than his sister Yvonne and $m + 2$ years younger than his brother Julio. Yvonne is 13 and Julio is 21.

How old is Juan?

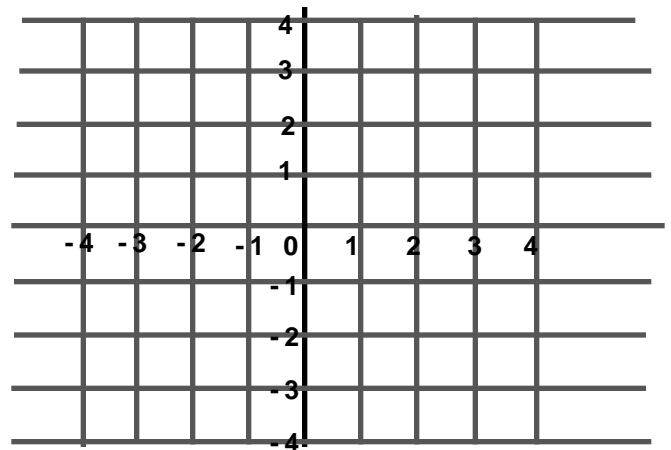
Show your work or explain your thinking if you worked it out mentally.

Juan is _____ years old

30. On the grid below, **plot**, and **label**, the points for these ordered pairs.

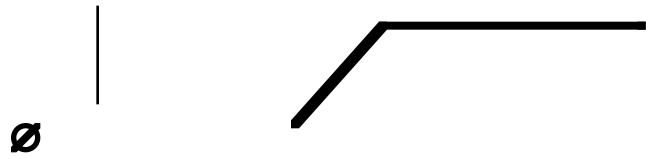
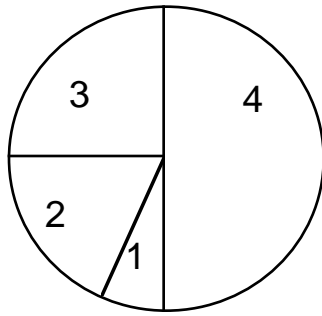
- A. 3, 4
- B. 1, 2
- C. 4, -3
- D. 0, -2
- E. -4, -3
- F. -1, 2
- G. -3, 4

Now **connect** the points in ABC order.



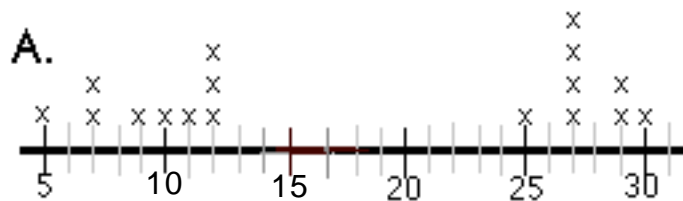
Work space

Please number the problems as you work on them here and on the backs of these pages.



23. Which set of data fits the landmarks below?

mean 18 median 12
 mode 27 range 25
 maximum 30 minimum 5
 Circle one: A B C



B.

stems	leaves
10's	1's
0	5 7 7 9
10	0 1 2 3 3 4 4
20	5 6 6 7 7 7 7 9 9
30	0 2 2 2 4

C.

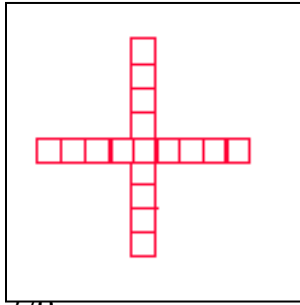
5	///
7	///
9	//
10	//
11	///
12	///
25	/
27	////

Sixth Grade Math Inventory Answer Key

- | | |
|--|---|
| 1) 7, 2, 19; explanation (1/2 pt. each) | 16) -6
5
1 |
| 2) 45 to 50 | -4 9 -5 0
(3 correct answers needed for 1 point) |
| 3) 235 to 270 | |
| 4) 5.05, 5.999, 6, $6\frac{1}{3}$, $6\frac{1}{2}$ (all in order 1 point) | 17) 27 players |
| 5) $\frac{7}{5}$ 1.4 180% $\frac{19}{4}$ <u>4.75</u> 475%
$\frac{19}{5}$ 3.8 <u>380%</u> (4 out of 6 for 1 point) | 18) 27 $\frac{9}{3}$
$\frac{9}{3}$ $\frac{1}{3}$
1 $\frac{1}{3}$
<u>$\frac{1}{3}$</u> $\frac{1}{9}$ |
| 6) 3 inches | Rule: Divide by 3 or multiply by $\frac{1}{3}$ (or $-\frac{2}{3}$) |
| 7) -46 , -4.6 , 0.46 , 4.6 , 460 (all for 1 point) | (Need rule, plus 3 correct answers for 1 point) |
| 8) $6\frac{2}{15}$ | 19) cylinder, rectangular prism or cube sphere |
| 9) $1\frac{1}{2}$ or $1\frac{3}{6}$ | |
| 10) 33 | 20) area = 548 sq. ft.
volume = 840 cubic ft.
(half point each – labeled) |
| 11) $2\frac{1}{2}$ | |
| 12) 7.5 | 21) 3 out of 12 or 1 out of 4 |
| 13) 4.5 | 22) 20 batches; explanation
(1/2 point for each) |
| 14) 9 | 23) A |
| 15) 4 | 24) 3 and a half days |

Sixth Grade Math Inventory Answer Key

25)



26)

270

27)

6 to the 5th power

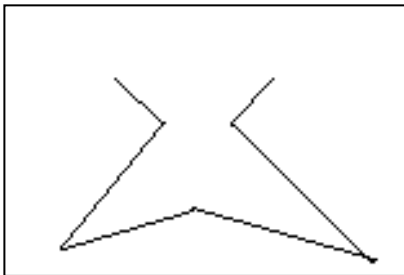
28)

298 r. 13 or
298.52 or
298 $\frac{13}{25}$

29)

16 years old

30)



Points must be labeled to
received a point. First and last
point may or may not be joined
at the top.

