

Place Values, Comparison & Estimation

2. When you compare numbers, compare from the highest place value to lowest place value.

Higher place value  $\longleftrightarrow$  Lower place value

13.068                      13.068 kg < 13.608 kg  
13.608

F > **G** < H = J +

18.  $9.375 \approx 9.38$

Nearest hundredth

F 9.40 **G** 9.38 H 9.37 J 9.47

- 25.
- A  $4.036 < 4.08 < 4.2 < 4.201$   
 B  $3.09 < 3.1 < 3.607 < 3.9$   
**C**  $6.4 < 6.51 < 6.387 < 6.995$   
 D  $7.315 < 7.38 < 7.406 < 7.5$

31.  $5,832.40 \div 16.11 \approx 5800 \div 16 \approx 362 \approx 400$

$$\begin{array}{r} 362 \\ 16 \overline{) 5800} \\ \underline{-48} \phantom{00} \\ 100 \phantom{0} \\ \underline{-96} \phantom{0} \\ 40 \\ \underline{-32} \\ 8 \end{array}$$

- A A day on Venus is about 40 times as long as a day on Neptune.  
**B** A day on Venus is about 400 times as long as a day on Neptune.  
 C A day on Venus is about 50 times as long as a day on Neptune.  
 D A day on Venus is about 500 times as long as a day on Neptune.

Basic Operations

12.  $224 \times 16 + 14 = 3584 + 14 = 3598$

$$\begin{array}{r} 224 \\ \times 16 \\ \hline 1344 \\ +224 \phantom{0} \\ \hline 3584 \end{array} \qquad \begin{array}{r} 3584 \\ + 14 \\ \hline 3598 \end{array}$$

F 3,478 **G** 3,598 H 3,808 J 3,584

14. order of operation:

1. parenthesis ( )
2. multiplication/division  $\times/\div$
3. addition/subtraction  $+/-$

$h = (500-260) \div 2 = 240 \div 2 = 120$

F 380 G 180 H 370 **J** 120

1.  $5 \overline{) 3.20}$

$$\begin{array}{r} .64 \\ 5 \overline{) 3.20} \\ \underline{-30} \phantom{0} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

A \$1.44 B \$1.56 **C** \$0.64 D \$1.80

17.  $32.6 \times 3.8$  multiplication with decimals

$$\begin{array}{r} 32.6 \\ \times 3.8 \\ \hline 2608 \\ + 978 \phantom{0} \\ \hline 12388 \end{array}$$

(1) multiplication as if there is no decimal points  
 (2) maintain the number of digits after the decimal points

A 36.40 lb B 12.388 lb C 96.48 lb **D** 123.88 lb

8.  $1 \div \frac{1}{6} = \frac{1}{1} \times \frac{6}{1} = 1 \times 6 = 6$ . (1 equals 6 pieces of  $\frac{1}{6}$ )

times the reciprocal of the divisor

$$24 \div \frac{1}{6} = \frac{24}{1} \times \frac{6}{1} = \frac{24 \times 6}{1} = 24 \times 6 = 144$$

F 4 **G** 144 H 30 J 240

29.  $\frac{1}{8} \div \frac{1}{6} = \frac{1}{8} \times \frac{6}{1} = \frac{1 \times 6}{8 \times 1} = \frac{6}{8} = \frac{3}{4}$

times the reciprocal of the divisor

A  $\frac{1}{8}$  acre B  $\frac{1}{14}$  acre C  $\frac{3}{4}$  acre **D**  $\frac{1}{48}$  acre

4.  $\frac{6}{15} - \frac{2}{5} = \frac{6}{15} - \frac{6}{15} = \frac{11}{15} - \frac{2}{5}$

F  $\frac{11}{15} - \frac{1}{6}$  G  $\frac{11}{12} - \frac{6}{12}$  H  $\frac{6}{15} - \frac{4}{15}$  **J**  $\frac{11}{15} - \frac{2}{5}$

21. tip(1):  $\frac{1}{2} = \frac{2}{4}$  tip(2):  $\frac{5}{4} = 1\frac{1}{4}$

$$16\frac{3}{4} + 9\frac{1}{2} = 16\frac{3}{4} + 9\frac{2}{4} = 25\frac{5}{4} = 26\frac{1}{4}$$

**A**  $26\frac{1}{4}$  ft B  $25\frac{1}{4}$  ft C  $25\frac{2}{3}$  ft D 26 ft

<p>10. <math display="block">\begin{array}{r} 158.757 \\ + 95.250 \\ \hline 254.007 \end{array}</math> <math display="block">\begin{array}{r} 158.757 \\ - 95.250 \\ \hline 63.507 \end{array}</math> <math display="block">\begin{array}{r} 1.680 \\ - 1.448 \\ \hline 0.232 \end{array}</math> <math display="block">\begin{array}{r} 1.680 \\ + 1.448 \\ \hline 3.128 \end{array}</math> </p>	<p style="text-align: right;"><b>addition/subtraction with decimals: align the decimal points</b></p> <p>Ⓒ The mass of the male gorilla is 63.507 kg greater than the mass of the female gorilla.</p>
<p>22. <math display="block">\begin{array}{r} 16 \\ 33 \overline{) 528} \\ \underline{-33} \\ 198 \\ \underline{-198} \\ 0 \end{array}</math> <p style="text-align: right;">estimation: <math>30 \times 6 = 180</math></p> </p>	<p>32. order of operation: 1. parenthesis ( ) 2. multiplication/division <math>\times/\div</math> 3. addition/subtraction <math>+/-</math></p> <p><math>8 \times (3.8 + 13.2) - 6 = 8 \times 17 - 6 = 136 - 6 = 130</math></p> <p>F 37.6   G 61.4   <b>H 130</b>   J 88</p>
<p>33. <math display="block">\begin{array}{r} 79.5 \\ 12 \overline{) 954.0} \\ \underline{-84} \\ 114 \\ \underline{-108} \\ 60 \\ \underline{-60} \\ 0 \end{array}</math> <p style="text-align: right;"><b>division with decimals: align the decimal points</b></p> <p>try out: <math>12 \times 8 = 96 &gt; 95</math> try out: <math>12 \times 10 = 120 &gt; 114</math></p> </p>	<p>35. <math display="block">\begin{array}{r} 1.35 \\ \times 48 \\ \hline 1080 \\ + 540 \\ \hline 64.80 \end{array}</math> <p><b>multiplication with decimals</b> (1) multiplication as if there is no decimal points (2) <b>maintain the number of digits after the decimal points</b></p> <p>A 50.4 oz   B 40.4 oz   <b>C 64.8 oz</b>   D 16.2 oz</p> </p>

Ⓐ \$7.95   B \$7.96   C \$1,144.80   D \$107.40

**Geometry (Measurement, Shape Classification, Perimeter, Area & Volume)**

<p>15. quadrilateral: two sets of parallel sides</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">parallelogram</p> <p style="text-align: center;">90° ↓</p> <p style="text-align: center;">rectangle</p> <p style="text-align: center;">one set of parallel sides: trapezoid</p> <p>A Trapezoids   <b>B Squares</b>   C Pentagons   D Rhombuses</p>	<p>23. A <del>Trapezoid</del> Trapezoids are not a parallelograms. B <del>Quadrilateral</del> Quadrilaterals include parallelograms. <b>C Rhombus</b> D <del>Triangle</del> triangles have three sides.</p> <div style="text-align: center;"> </div>
<p>6. <math>(9.35 + 9.35) + (6.82 + 6.82) = 18.7 + 13.64 = 32.34</math></p>	<p>27. <math display="block">\begin{array}{r} 24 \\ \times 36 \\ \hline 144 \\ + 72 \\ \hline 864 \end{array}</math> <p><b>A 864 square inches</b></p> </p>
<p>3. <math>6 \times 11 \times 3 = 66 \times 3 = 198</math></p> <p><b>A 198</b></p>	<p>36. <math>8 \times 10 \times 6 = 80 \times 6 = 480</math></p> <p>F 48   G 80   H 160   <b>J Not here</b></p>

**Prime Number & Composite Number**

13. prime number: can only be divided by itself and 1.  
1 is not prime and also not composite.  
2 is the smallest prime number.  
2 is the only prime number that is also even.

**A Brenda is correct.**   C Both of them are correct.  
B Carla is correct.   D Neither of them is correct.

**Financial Literacy**

20. 

A tax that includes Social Security and Medicare taxes and is paid by an employer

**F Payroll tax**   G Property tax   H Sales tax   J Gasoline tax

↓
↓  
House, land
purchasing

**Expressions**

19. The length of a piece of yarn is 19.2 units. Jesse cut the piece of yarn into 4 smaller pieces that were **all the same length**. Which expression represents the length of each smaller piece of yarn?

- A  $19.2 \times 4$     B  $19.2 - 4$     **C  $19.2 \div 4$**     D  $19.2 + 4$



16.  $3 \times 8 - 2 - 7 = 3 \times 8 - (2 + 7) = 3 \times 8 - 9 = 24 - 9 = 15$

- F  $3 \times 8 - 2 + 7$     **H  $3 \times 8 - (2 + 7)$**   
 G  $3(8) - 2(7)$     J  $3 + 8 - 2 + 7$

26. How many sections are needed:

$144 \div 4 = 36$

Each section costs \$12.

$36 \times 12 = 432$

**J  $(144 \div 4) \times 12 = b$**

5. The relationship between numbers in List X and List Y follows the rule  $y = x + 2.05$ . Which diagram shows this relationship?

**A**

List X	+2.5	List Y
29.1	→	31.6
34.1	→	36.6
39.1	→	41.6
44.1	→	46.6

**C**

List X	List Y
29.1	→ 31.15
34.1	→ 36.15
39.1	→ 41.15
44.1	→ 46.15

**B**

List X	+2	List Y
31.15	→	33.15
33.2	→	35.2
35.25	→	37.25
37.3	→	39.3

**D**

List X	-2.05	List Y
31.15	→	29.1
36.15	→	34.1
41.15	→	39.1
46.15	→	44.1

24. Which table represents the equation  $y = 3x$ ?

**F**

x	y
3	1
6	2
15	5
18	6

$Y = \frac{1}{3}x$

**H**

x	y
1	1
3	3
5	5
7	7

$Y = x$

**G**

x	y
1	3
3	9
4	12
7	21

**J**

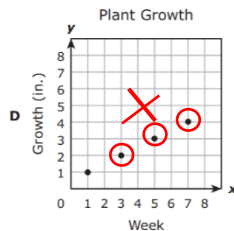
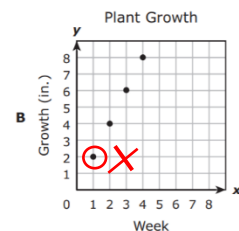
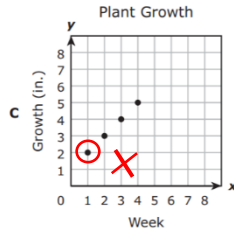
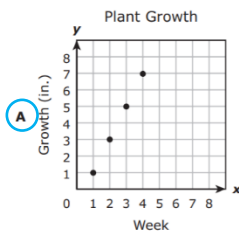
x	y
1	3
4	12
6	18
7	21

**Coordinate Planes**

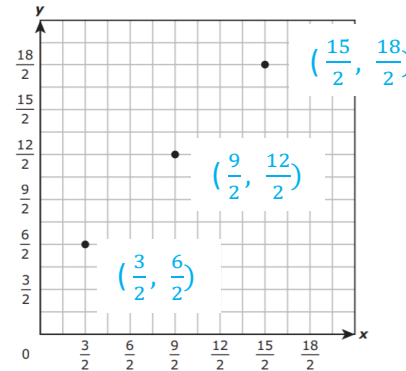
11. Thomas planted a seed and measured the height of the stem each week for four weeks.

- The stem grew **1 inch** in the **first week**.
- The stem grew **2 inches** each week after the first week.

Which graph represents the growth of this plant?



34. Three points are plotted on the coordinate grid.



Which table represents the data plotted in the graph?

**J**

x	$\frac{3}{2}$	$\frac{9}{2}$	$\frac{15}{2}$
y	$\frac{6}{2}$	$\frac{12}{2}$	$\frac{18}{2}$

9. The origin is the point where the x-axis and the y-axis intersect on a coordinate plane.

- A (5, 5)    B (5, 0)    C (0, 5)    **D (0, 0)**

Data Analysis

7. The stem and leaf plot shows the numbers of minutes the members of a team jumped rope during practice.

Practice Times

Stem	Leaf
1	9 9
2	0 1 3
3	3 4 6 7
4	1 1 3 5 9 9
5	0 4 2
6	3 5 6

The original numbers:  
 19 19  
 20 21 23  
 33 34 36 37  
 41 41 43 45 49 49  
 50 54 52  
 63 65 66

3|6 means 36 minutes.

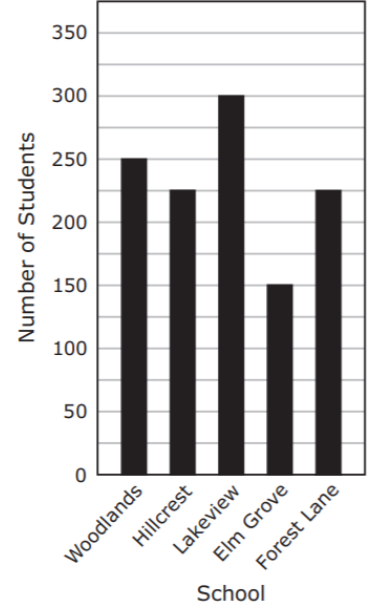
What is the difference between the least number of minutes jumped and the greatest number of minutes jumped?

$66 - 19 = 47$

- (A)47 B 9 C 5 D 49

28. The graph shows the number of students at five schools who ride the bus to school.

Riding the Bus to School



Based on the graph, how many students ride the bus to the Woodlands, Hillcrest, and Lakeview schools?

Woodlands	250
Hillcrest	225
Lakeview	300
Elm Grove	150
Forest Lane	225

$250 + 225 + 300 = 775$

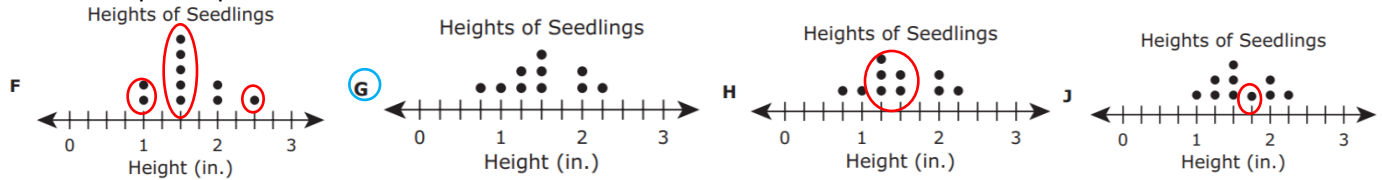
30. The table shows the heights of 10 seedlings.

Heights of Seedlings

Seedling	A	B	C	D	E	F	G	H	I	J
Height (in.)	$1\frac{1}{4}$	2	$1\frac{1}{4}$	$1\frac{1}{2}$	$\frac{3}{4}$	$2\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	1	2

Height	Count
$\frac{3}{4}$	1
1	1
$1\frac{1}{4}$	2
$1\frac{1}{2}$	3
2	2
$2\frac{1}{4}$	1

Which dot plot represents these data?



Answer Key

1 C	2 G	3 A	4 J	5 C	6 32.34	7 A	8 G
9 D	10 G	11 A	12 G	13 A	14 J	15 B	16 H
17 D	18 G	19 C	20 F	21 A	22 16	23 C	24 G
25 C	26 J	27 A	28 775	29 D	30 G	31 B	32 H
33 A	34 J	35 C	36 J				