

Practice Final

Find the value of each expression

1.  $17 + (9 - 6) \times 3^3$

$$17 + (3)(27)$$
$$17 + 81 = 98$$

2.  $8 + 6 \times 4 \div 2^3$

$$8 + 24 \div 8$$
$$8 + 3 = 11$$

Define each variable. Then write each phrase as an algebraic expression

3. 20 minutes faster than Jarod's time

$$j + 20 \quad j = \text{Jarod's time}$$

4. Two thirds the amount of salt

$$\frac{2}{3}s \quad s = \text{amount of salt}$$

Give an example of each of the following properties

5. associative

6. commutative



7. distributive

8. Simplify  $7x + 2(5 - 3x)$

$$7x + 10 - 6x = 10 + x$$

Solve each equation

9.  $y + \frac{2}{3} = \frac{1}{6}$

$$y + \frac{4}{6} = \frac{1}{6}$$

$$y = \frac{-3}{6} = -\frac{1}{2}$$

$$y = -\frac{1}{2}$$

10.  $c - 24 = 75$

$$\begin{array}{r} +24 +24 \\ \hline \end{array}$$

$$c = 99$$

11.  $14g = 238$

$$\begin{array}{r} 14 \quad 14 \\ \hline \end{array}$$

$$g = 17$$

12.  $41 = \frac{h}{13}$

$$h = 41 \times 13 = 533$$

13. Fred is making a bouquet of carnations and roses. The carnations cost \$4.37 in all. The roses cost \$1.34 each. How many roses did Fred use if the bouquet cost \$12.41 in all?

$$\begin{array}{r} \$ 4.37 + 1.34x = 12.41 \\ - 4.37 \\ \hline \$ 1.34x = 8.04 \\ \begin{array}{r} 1.34 \quad 1.34 \\ \hline \end{array} \\ \hline x = 6 \text{ roses} \end{array}$$

Find the rule for each function table

14.

Input (x)	Output (y)
2	5
5	17
7	25

3  
2

12  
8

$$m = \frac{12}{3} = \frac{8}{2} = 4$$

$$y = 4x - 3$$

$$y = 4x + ?$$

$$5 = 4(2) + ?$$

$$5 = 8 + ?$$

subtract 3!

~~$$y = \frac{x}{4}$$~~

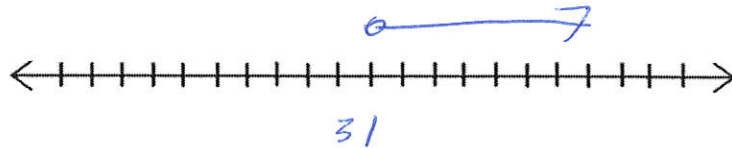
15.

Input (x)	Output (y)
8	$\div 4$ 2
24	$\div 4$ 6
36	$\div 4$ 9

Solve and graph each inequality

16.  $d - 13 > 18$

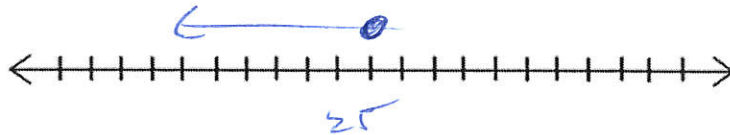
$$\begin{array}{r} +13 +13 \\ \hline d > 31 \end{array}$$



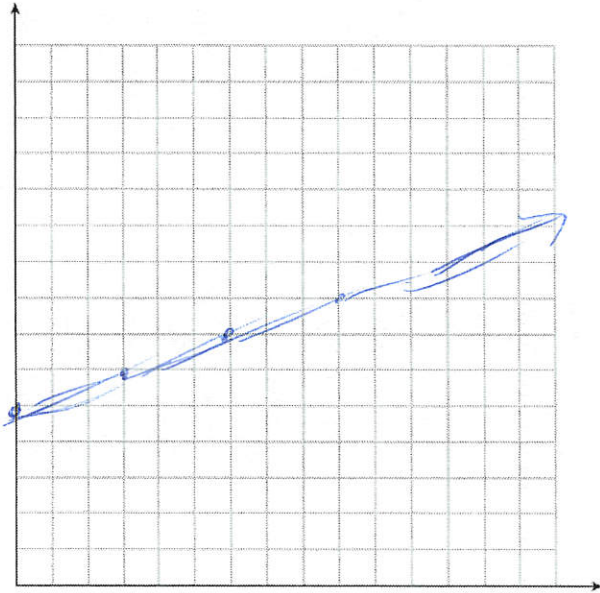
17.  $3x \leq 75$

$$\begin{array}{r} \overline{3} \quad \overline{3} \\ \hline 3 \quad 3 \end{array}$$

$$x \leq 25$$

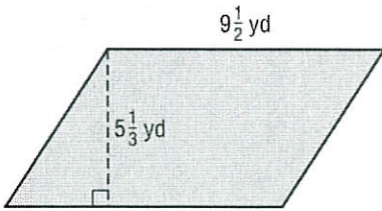


18. Graph the equation  $y = \frac{1}{3}x + 4$



Find the area of each figure

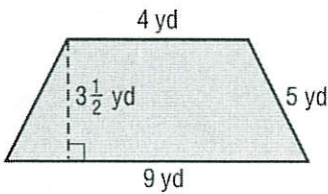
19.



$$A = bh = \left(9\frac{1}{2}\right)\left(5\frac{1}{3}\right)$$

$$= \left(\frac{19}{2}\right)\left(\frac{16}{3}\right) = \frac{152}{3} = 50\frac{2}{3} \text{ yd}^2$$

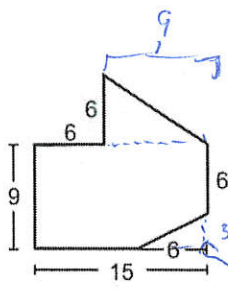
20.



$$A = \frac{1}{2}(4+9)\left(3\frac{1}{2}\right)$$

$$= \frac{1}{2}(13)\left(\frac{7}{2}\right) = \frac{91}{4} = 22\frac{3}{4} \text{ yd}^2$$

21.



$$\frac{9 \cdot 6}{2} = \frac{54}{2} = 27$$

$$15 \times 9 = 135$$

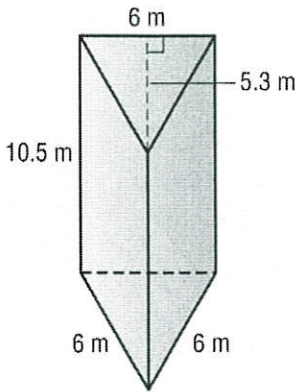
$$\frac{1}{2}(6)(3) = 9$$

$$\begin{array}{r} 135 \\ + 27 \\ \hline 162 \\ - 9 \\ \hline 153 \text{ units}^2 \end{array}$$

$3 \times 5.3$

Find the volume of each figure

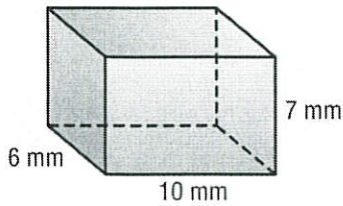
22.



$\frac{(6 \times 5.3)}{2} \times 10.5$

$= 15.9 \times 10.5 = 166.95 \text{ m}^3$

23.

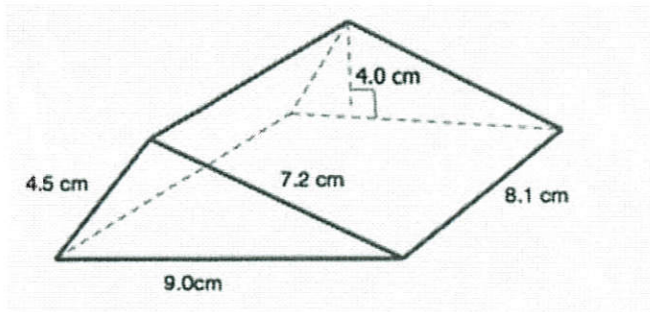


$6 \times 10 \times 7$

$= 420 \text{ mm}^3$

Find the surface area

bases  
 $\Rightarrow \left[ \frac{(9 \times 4)}{2} \right] = 36$



24.

~~8.1~~  $9 \times 8.1 = 72.9$   
 $4.5 \times 8.1 = 36.45$   
 $7.2 \times 8.1 = 58.32$

add!

$203.55 \text{ cm}^2$

Find the mean, median, mode, range, first and third quartiles, and the interquartile range

25.

Number of CDs					
12	10	21	7	2	17
5	8	12	0	0	16
18	0	20	13	5	16

2, 2, 10, 2, 5, 7, 8, 10, 12, 12, 13, 16, 17, 18, 20, 21

~~0, 0, 2, 5, 7, 8, 10, 12, 13~~

$12R - 16 - 5 = 9$

Mean  
 $\frac{182}{18} = 10.1$

11 - Median  
~~0 - Mode~~ Mode  
5 - Q<sub>1</sub>    16 - Q<sub>3</sub>

26. Serge had the following scores on his math tests last quarter: 91, 87, 89, 82, 100, 81, 92, and 72.

Find the mean absolute deviation for the set of data. How many data values are closer than one mean absolute deviation away from the mean?

5 data values are between  
 $80.50 - 93$

Mean  
 $\frac{694}{8} = 86.75 = 87$

$\frac{4 + 0 + 2 + 5 + 13 + 6 + 5 + 15}{8} = \frac{50}{8} = 6.25$

Mean Absolute Deviation  
 $= 6.25$

When preparing for the test, please consider the following.

- You will be allowed one page of notes.
- Calculators will NOT be allowed during the actual final.
- Your final for 6<sup>th</sup> grade math will be on Wednesday, June 1<sup>st</sup>, from 8:30-10:00 a.m.
- This study guide will be DUE, completed, on the day of the final. It will be considered homework, worth 13 points!