

REVIEW Chapters 10 & 8

Find Area & Perimeter of 2-Dimensional Figures (10.1, 10.2, & 10.5)

Find the perimeter or circumference and any unknown side measure of each figure. Show work to justify your answers.

1.

$6 + 2 + 5 + 15 + 5 + 1 + 6 = 18m$
 side $n = 15m$
 Perimeter = 58m

2. Circumference = 62.8 cm

$C = \pi \cdot D$
 $62.8 = 3.14 \cdot D$
 $\frac{62.8}{3.14} = \frac{3.14 \cdot D}{3.14}$
 $20 = D$
 diameter = 20 cm

Find the area of each figure. Show your work. Be sure to label!!

3.

$A_{\square} = B \cdot H$
 $12 \cdot 8$
 Area = 96 ft²

4.

$\frac{1}{2} B \cdot H$
 $6 \cdot 10.5$
 $\begin{array}{r} 10.5 \\ \times 6 \\ \hline 63.0 \end{array}$
 Area = 63 yd²

Find the Perimeter and the Area. Show your work. Be sure to label!!

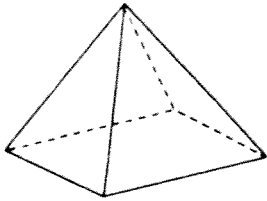
5.

$9 + 12 + 15 = \text{Perimeter} = \underline{36 \text{ cm}}$
 $\frac{1}{2} B \cdot H$
 $6 \cdot 9 =$
 Area = 54 cm²

Identify 3-Dimensional Figures & Find Volume of Prisms (10.6-10.8)

Name the polyhedron. Then identify the number of faces (F), edges (E), and vertices (V).

6.

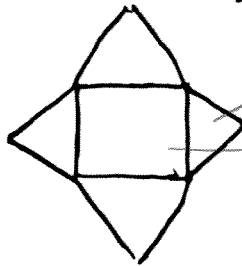


Name: Rectangular Pyramid

F = 5 E = 8 V = 5
 1 Base 4-bottom 4-bottom
 4 Faces 4-side 1-top

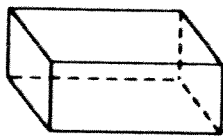
Multiple Choice: Circle the correct answer.

7. Which of the solids could be formed by folding this net?

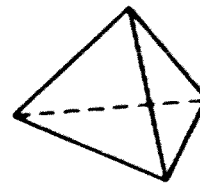


triangle faces = pyramid
 1 square/rectangle base

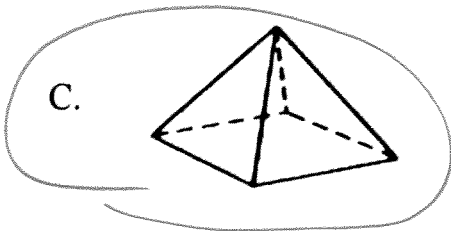
A.



B.



C.

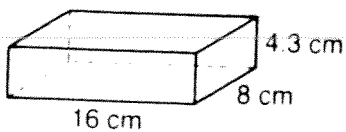


D.



Find the volume. Show work to justify your answer. Be sure to label!!

8.



$$V = A \cdot B \times H$$

$$\begin{matrix} \swarrow & \searrow \\ L & W \\ 16 & \cdot & 8 & = & 4.3 \end{matrix}$$

Volume = 550.4 cm

$$\begin{array}{r} 16 \\ \times 8 \\ \hline 128 \\ \times 43 \\ \hline 384 \\ 512 \\ \hline 5504 \end{array}$$

Determine Geometric Transformations

(7.10)

Tell whether each is a translation, rotation or reflection. Write your answer in the blank provided.

9.



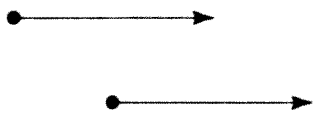
rotation

10.



reflection

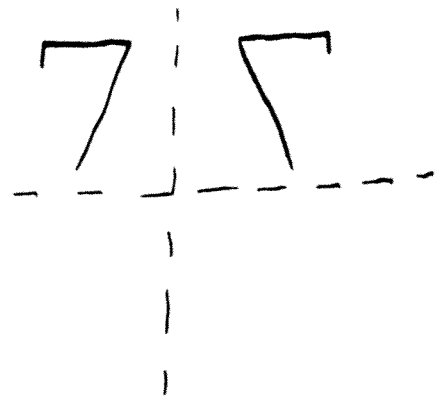
11. Label each transformation (translation, reflection or rotation).



a. translation



b. rotation

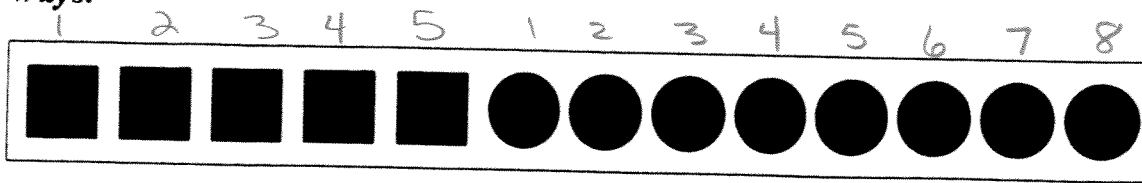


c. reflection

Write and Find Rates and Ratios

(8.1)

Use the shapes pictured to find each ratio. Write each ratio in three different ways.



12. Circle to Squares $\frac{8:5}{8 \text{ to } 5} \frac{8}{5}$

13. Squares to All Shapes $\frac{5:13}{5 \text{ to } 13} \frac{5}{13}$

Find the following rates. Show work to justify your answers.

14. The Scott Science Olympiad team scored 568 points in 8 competitions. How many points did they score in an average competition?

$$\frac{568 \text{ pts}}{8 \text{ competitions}} \div 8 = \frac{n}{1 \text{ comp.}}$$

$$8 \overline{) 568}$$

$$\begin{array}{r} 71 \\ 8 \overline{) 568} \\ \underline{56} \\ 8 \\ \underline{8} \\ 0 \end{array}$$

14. 71 points

15. At Hy-Vee 8 pounds of strawberries are \$6.48, or 5 pounds of strawberries for \$4.10. Which is a better buy?

$$\frac{\$6.48}{8 \text{ lbs}} \div 8 = \frac{n}{1 \text{ lb.}}$$

$$\frac{\$4.10}{5 \text{ lbs}} \div 5 = \frac{n}{1 \text{ lb.}}$$

$$8 \overline{) 6.48} \quad n = \$0.81$$

$$5 \overline{) 4.10} \quad n = \$0.82$$

15. 8 lbs for \$6.48

Write and Solve Proportions

(8.2 & 8.3)

Find the missing value in each proportion. Show your work.

16. $\frac{6}{15} = \frac{10}{n}$

25

$$\frac{150 = 6n}{6 \quad 6}$$

$$6 \overline{) 150}$$

$$\begin{array}{r} 25 \\ 6 \overline{) 150} \\ \underline{12} \\ 30 \\ \underline{30} \\ 0 \end{array}$$

17. $\frac{8}{12} = \frac{n}{21}$

14

$$8 \cdot 21 = 12n$$

$$\frac{168}{12} = \frac{12n}{12}$$

$$12 \overline{) 168}$$

$$\begin{array}{r} 14 \\ 12 \overline{) 168} \\ \underline{12} \\ 48 \\ \underline{48} \\ 0 \end{array}$$

Solve. Show your work.

18. The value of 6 U.S. dollars is about 168 Russian rubles.
What is the value of 25 rubles?

$$\frac{6 \text{ U.S.}}{168 \text{ rubles}} = \frac{n}{25 \text{ rubles}}$$

$$168n = 6 \cdot 25$$

$$\frac{168n}{168} = \frac{150}{168} \div \frac{6}{6} = \frac{25}{28}$$

reduce
or divide to make decimal

$$18. \quad \begin{array}{r} 0.89 \\ 28 \overline{) 25.0} \\ \underline{224} \\ 260 \\ \underline{252} \\ 80 \end{array}$$

Conversion table.

Length	Weight	Time	Capacity
1 foot = 12 inches	1 pound = 16 ounces	1 minute = 60 seconds	1 cup = 8 fluid ounces
1 yard = 36 inches	1 ton = 2,000 pounds	1 hour = 60 minutes	1 pint = 2 cups
1 yard = 3 feet		1 day = 24 hours	1 quart = 2 pints
1 mile = 5,280 feet		1 week = 7 days	1 quart = 4 cups
1 mile = 1,760 yards		1 year = 365 days	1 gallon = 4 quarts
		1 leap year = 366 days	1 gallon = 16 cups

Find each missing value. You may use the table to find conversion rates.

Show your work.

19. 9 Cups = 72 fl oz.

$$\frac{8 \text{ fl oz} \times 9}{1 \text{ cup} \times 9} = \frac{72 \text{ fl oz}}{n}$$

20. 2.5 days = 60 hours

$$\frac{24 \text{ hrs} \times 2.5}{1 \text{ day} \times 2.5} = \frac{\quad}{2.5 \text{ days}}$$

$$\begin{array}{r} 24 \\ 2.5 \\ \hline 120 \\ 48 \\ \hline 600 \end{array}$$

Error analysis.

21. Mr. Error said he is 72 inches tall and that he is taller than his friend, John. John is 6.25 feet tall. Mr. E. said 72 is much bigger than 6.25, so that is why he is taller. In the box below, show and explain to Mr. Error that he is **not** correct.

<p>Mr. Error</p> $\frac{72 \text{ in}}{n \text{ ft}} = \frac{12 \text{ in}}{1 \text{ ft}}$ $\frac{72}{12} = \frac{12n}{12}$ <p>6 ft</p>	<p>John</p> <p>6.25 ft</p> <p>John is taller</p>
---	--


Complete the table.

22. Write each percent as a fraction in simplest form and as a decimal.

	Percent	Fraction (simplest form)	Decimal
A.	88%	$\frac{88}{100} \div \frac{4}{4} = \frac{22}{25}$	0.88
B.	475%	$\frac{475}{100} \div \frac{25}{25} = \frac{19}{4}$	4.75
C.	5%	$\frac{5}{100} \div \frac{5}{5} = \frac{1}{20}$	0.05

$4\frac{3}{4} = \frac{19}{4}$

Compare using >, <, or =. Show your work.

23. 15% of 60  45% of 19

$$\begin{array}{r} 0.15 \\ \times 60 \\ \hline 9.00 \end{array} > \begin{array}{r} 0.45 \\ \times 19 \\ \hline 405 \\ 45 \\ \hline 8.55 \end{array}$$

Solve. Show your work.

24. Lance saved 15% on a game that had an original price of \$60. What was the sale price before sales tax was added?

$$85\% \text{ of } 60 \quad 0.85 \times 60 \quad 24. \quad \underline{\$51}$$

25. Lance also bought a pack of batteries for \$11.50, he had to pay 7% sales tax. What will his total cost be for the batteries?

$$\$11.50 \times 107\%$$

25. \$12.31

$$11.5 \times 1.07$$

$$\begin{array}{r} 1.07 \\ \times 11.5 \\ \hline 535 \\ 107 \\ 107 \\ \hline 12.305 \end{array}$$

12.305 round to hundredth