

24-Hour Clock Worksheet

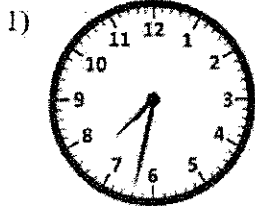
Name: _____ Date: _____

Convert the following times:

	Greenwich	Military
1	1:15 am	
2	2:35 pm	
3		1210
4	2:45 am	
5		0414
6		1800
7	8:25 am	
8	11:30 pm	
9	12:00 pm	
10		0110
11	3:25 pm	
12	9:15 pm	
13		2125
14		1505
15	10:40 pm	
16		2400
17	11:35 am	
18	8:55 pm	
19		2300
20		0845

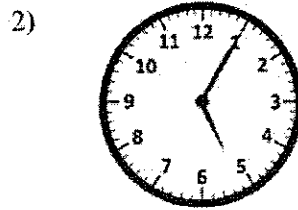
24 Hour Clock

Read the clock and write the time in both 12-hour and 24-hour notation.



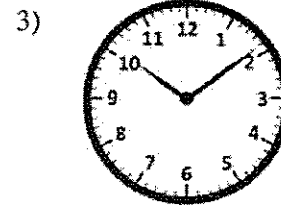
12-hour : _____ A.M.

24-hour : _____



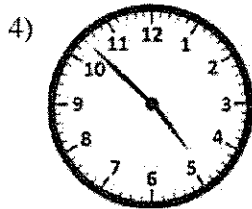
12-hour : _____ P.M.

24-hour : _____



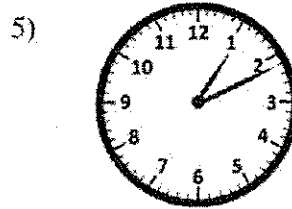
12-hour : _____ P.M.

24-hour : _____



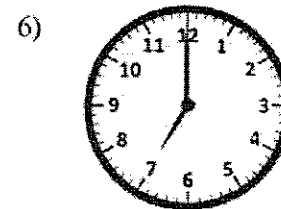
12-hour : _____ P.M.

24-hour : _____



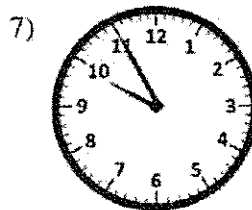
12-hour : _____ A.M.

24-hour : _____



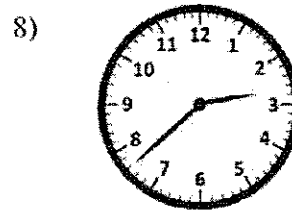
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24-hour : _____



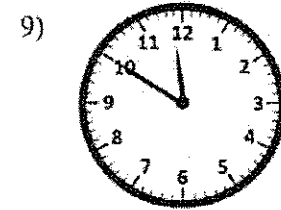
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24-hour : _____



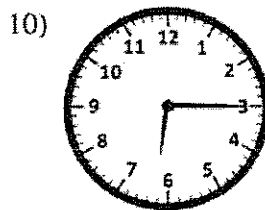
12-hour : _____ P.M.

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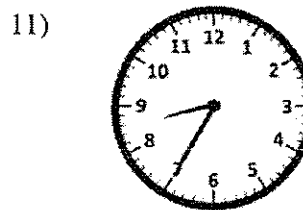
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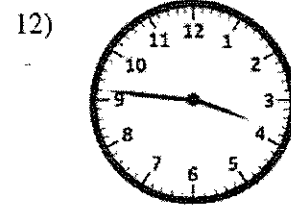
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24-hour : _____



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24-hour : _____

Practice

1. $6\overline{)564}$

5. $4\overline{)1,244}$

9. $2\overline{)46,882}$

2. $3\overline{)5,736}$

6. $53\overline{)5,088}$

10. $18\overline{)12,564}$

3. $4\overline{)12,345}$

7. $15\overline{)23,648}$

11. $7\overline{)87,543}$

4. $956 \div 66 =$

8. $1,254 \div 29 =$

12. $74,943 \div 271 =$

Applications

1. Room rates vary by the services provided. At the local hospital, intensive care unit (ICU) rooms are \$784 a day. Bob's overall room charge was \$10,192. How many days was Bob in ICU?
2. Carbohydrates have 4 calories per gram. If a serving of soup has 248 calories of carbohydrates, how many grams of carbohydrate are in that serving of soup?
3. A medical assistant subscribes to 14 magazines for the office. If the total subscription bill is \$294, what is the average cost of each magazine subscription?
4. A pharmacy technician receives a shipment of 302 boxes of acetaminophen. This shipment needs to be returned to the supplier because the expiration date on the medicine did not allow sufficient time to sell the medicine. If each case holds 36 individual boxes, how many cases must the pharmacy technician use to pack the medicine?
5. A surgical technologist made \$39,744 last year. He is paid twice a month. What is the gross or total amount of each of his paychecks?

Practice

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Part VI: Add or subtract these decimals as indicated.

1. $38.5 + 5.6$

2. $110.7 + 40.2$

3. $10.5 + 16.9$

4. $69.8 - 14.6$

5. $115.6 - 13.9$

6. $102.5 - 4.8$

Part VII: Express each decimal as a percent.

1. 0.16

2. 0.29

3. 0.91

Practical Problems

1. Add the following fractions:

a. $\frac{3}{8} + \frac{5}{8} + \frac{1}{8}$

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

c. $2\frac{3}{4} + 1\frac{3}{4}$

d. $3\frac{5}{8} + 20\frac{3}{8}$

e. $7\frac{3}{10} + 18\frac{1}{10} + 26\frac{5}{10} + 14\frac{3}{10}$

f. $8\frac{5}{12} + 106\frac{3}{4} + 77\frac{5}{6} + 23\frac{7}{10}$

2. A licensed practical nurse (LPN) gives a patient $\frac{1}{4}$ ounce (oz) of cough medicine at 6 PM and $\frac{3}{4}$ oz of cough medicine at 10 PM. How much cough medicine does he give?

3. A pediatric assistant is calculating the growth of an infant. The baby grew $\frac{5}{8}$ inch (") during the first month of life, $\frac{1}{4}$ " the second month, and $\frac{5}{16}$ " the third month. How much did the infant grow?

4. A surgical nurse in an outpatient surgical clinic works $1\frac{1}{4}$ hours in pre-operative care (before surgery), $2\frac{1}{2}$ hours in the operating room, and $3\frac{3}{4}$ hours in the recovery room. How many hours does she work each day?

14. A paramedic maintains a time card for hours she works on the rescue squad. How many hours did she work per week?

DAY OF WEEK	HOURS WORKED
Sunday	$6 \frac{1}{2}$
Monday	$8 \frac{1}{4}$
Tuesday	0
Wednesday	$7 \frac{3}{4}$
Thursday	$8 \frac{1}{12}$
Friday	$8 \frac{5}{12}$
Saturday	0
TOTAL	

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15. A hospice nurse administers $\frac{1}{8}$ grain (gr) of morphine sulfate to a cancer patient. Four hours later, she gives the patient $\frac{1}{8}$ gr. What is the total dose of morphine given to the patient? *one grain = 5mg*
16. A student receives her college schedule for her first semester of study in a pharmacy technician program.

COURSE	SEMESTER HOURS
Communications	2
Orientation	$\frac{1}{4}$
Study Skills	$\frac{1}{4}$
Anatomy and Physiology	$2 \frac{1}{2}$
Anatomy and Physiology Lab	$1 \frac{1}{2}$
Advanced Algebra	$2 \frac{1}{4}$
Physical Education	$\frac{1}{2}$

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What is the total number of semester hours?

MEDICAL MATHEMATICS ABBREVIATIONS

The following are the abbreviations that will be used on the HOSA National Medical Mathematics Exam. (Source: Simmers, Louise, *Diversified Health Occupations (OR Introduction to Health Science Technology)* Delmar, Latest edition.) Abbreviations of measurement terms not listed in the chart below will be spelled out. (Example: deciliter)

In addition, the test will use any and all standard medical abbreviations as designated in the: Simmers, Louise, *Diversified Health Occupations (OR Introduction to Health Science Technology)* text noted above.

Term	Abbreviation
millimeter	mm
meter	m
inch	in
gram	g
microgram	mcg
kilogram	kg
pound	lb
degrees Fahrenheit	° F
Unit	unit
pint	pt
gallon	gal

Term	Abbreviation
centimeter	cm
foot/feet	ft
milligram	mg
milliliter	ml or milliliter
liter	L
ounce	oz
degrees Celsius (Centigrade)	° C
quart	qt
tablespoon	tbsp or T
teaspoon	tsp or t
drop or drops	gtt or gtts

I&O Standards

Juice glass =	6 oz
Coffee cup =	8 oz
Tea cup =	6 oz
Soup bowl =	6 oz
Water glass =	7 oz
Jello cup =	5 oz
Ice cream =	4 oz
Creamer =	1 oz

Handwritten notes and diagrams:

What you want

What you have

Diagram showing a conversion: $(\text{oz}) \rightarrow \text{g}$

HOSA MEDICAL MATH CONVERSION CHART

METRIC SYSTEM

<p>Length</p> <p>1 meter = 100 centimeters = 1000 millimeters 10 millimeters = 1 centimeter</p>	<p>Temperature</p> <p>$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \frac{5}{9}$ $^{\circ}\text{F} = (^{\circ}\text{C}) \frac{9}{5} + 32$</p>
<p>Weight</p> <p>1 gram = 1000 milligrams 1 milligram = 1000 micrograms 1 kilogram = 1000 grams</p>	<p>Weight Conversion</p> <p>1 kilogram = 2.2 pounds 1 pound = 16 ounces</p>
<p>Volume for Solids</p> <p>1000 cubic millimeters = 1 cubic centimeter 1000 cubic centimeters = 1 cubic decimeter 1000 cubic decimeters = 1 cubic meter</p>	<p>Volume for Fluids</p> <p>1 liter = 1000 milliliters 10 centiliters = 1 deciliter 10 deciliters = 1 liter</p>

APPROXIMATE EQUIVALENTS AMONG SYSTEMS

The following will be used for calculations instead of selecting from approximate equivalents.

Metric	=	Household/English Liquid
1 liter		1 quart / 32 ounces / 2 pints
500 milliliters		1 pint / 16 ounces / 2 cups
240 milliliters		1 cup / 8 ounces
30 milliliters		1 ounce
15 milliliters		1 tablespoon / 3 teaspoons
5 milliliters		1 teaspoon
1 milliliter		15 drops
0.0667 milliliters		1 drop

Metric	=	Household/English Linear
1 meter		39.372 inches / 3.281 feet
0.914 meters		3 feet / 1 yard
0.3048 meters		12 inches / 1 foot
2.54 centimeters		1 inch

Source: Simmers, Louise, *Diversified Health Occupations (OR Introduction to Health Science Technology)* Delmar, Latest edition.

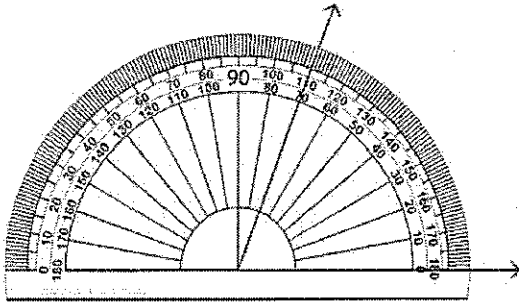
Name : _____

Score : _____

Reading Protractor

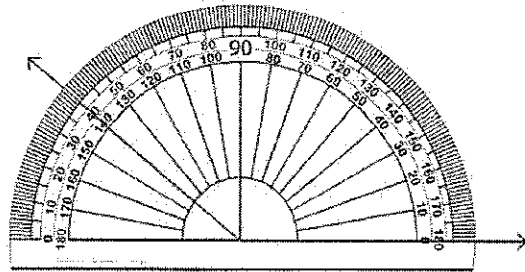
Measure each angle formed between a pair of rays using protractor.

1)



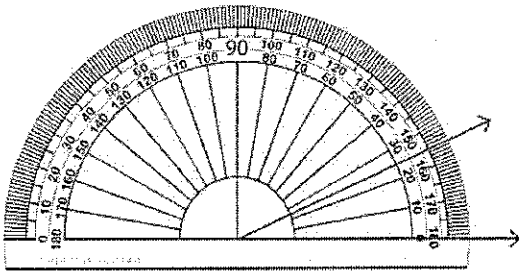
Angle : _____

2)



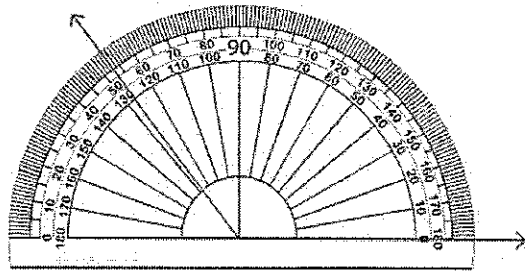
Angle : _____

3)



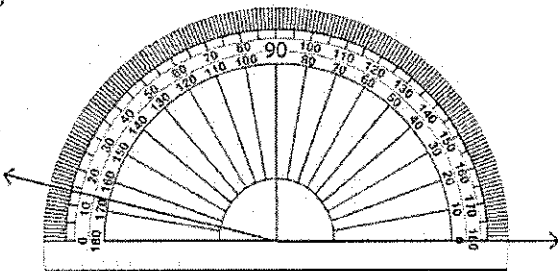
Angle : _____

4)



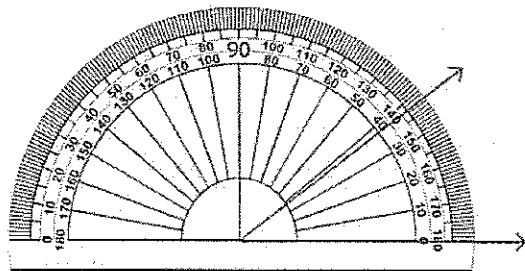
Angle : _____

5)



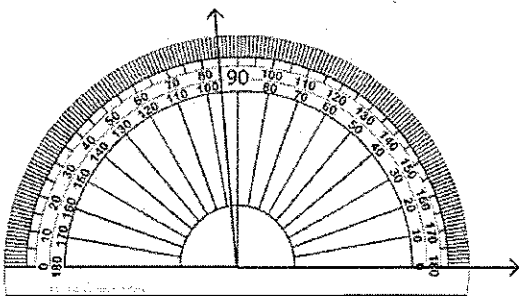
Angle : _____

6)



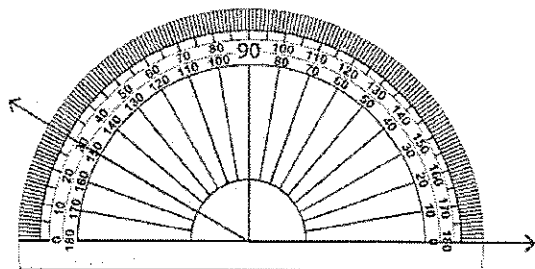
Angle : _____

7)



Angle : _____

8)



Angle : _____

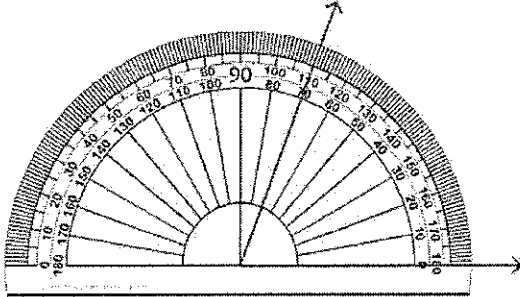
Name : _____

Score : _____

Answer Key

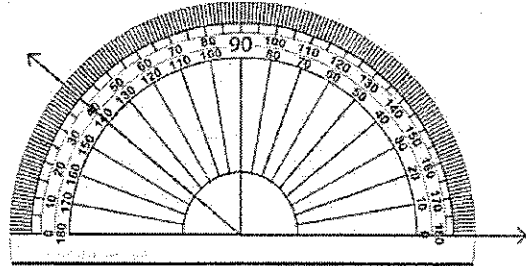
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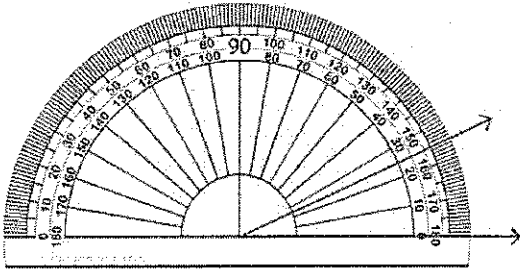
Angle : 70°

2)



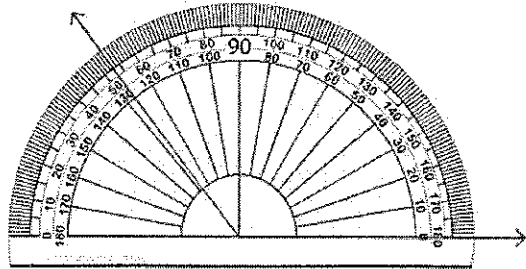
Angle : 140°

3)



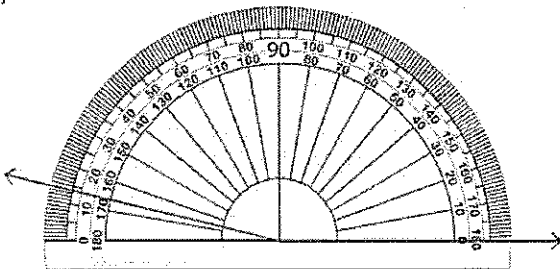
Angle : 25°

4)



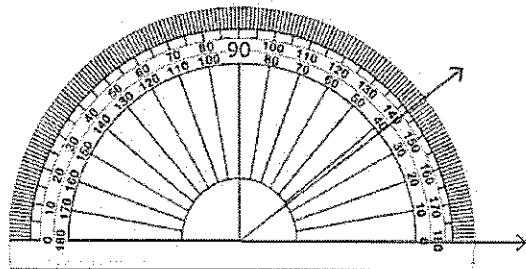
Angle : 127°

5)



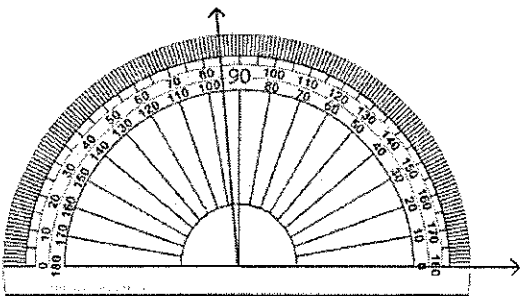
Angle : 166°

6)



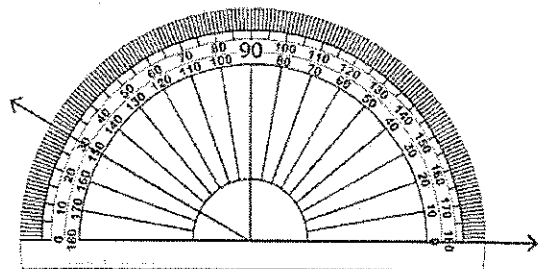
Angle : 38°

7)



Angle : 95°

8)



Angle : 150°