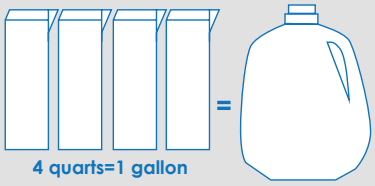
Liquid and Linear Measurement

4th Grade

1 hour=60 minutes

30 minutes=1800 seconds



4 quarts=1 gallon

1 cup=16 tablespoons

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Liquid and Linear Measurement

** Has an Answer Sheet*

LINEAR MEASUREMENTS

METRIC

1 Convert the following measurements.

1) .6 dm = _____ mm 2) 7.2 km = _____ m 3) 4.2 m = _____ cm

4) 2.8km = _____ m 5) 898 km = _____ m 6) 9325 cm = _____ m

7) .51 km = _____ dm 8) 175 mm = _____ dam 9) 916 km = _____ m

10) 830 mm = _____ dam 11) 36 hm = _____ cm 12) 2.1 km = _____ cm

13) 916.5 km = _____ m 14) 188 cm = _____ m 15) 345 dm = _____ km

16) 8.1 dam= _____ cm 17) 8921.5 m = _____ cm 18) 35.8 m= _____ mm

2 Compare the following measurements using >, < or =.

1) 9900 cm ◯ 99 m 2) 4000 mm ◯ 4 dm 3) 5 dam ◯ 4133dm

4) 2.4 km ◯ 2400 mm 5) 3.51m ◯ 351 hm 6) 34.1m ◯ 34100cm

7) 2341 dam ◯ 2.4 km 8) 72hm. ◯ 7200 m 9) 1.2km ◯ 1200dm

LINEAR MEASUREMENTS

1 Convert the following linear measurements.

HINT: 12 inches(in.) is equal to 1 foot(ft.), 3 feet is equal to 1 yard (yd.)

1) 2 yd. = ☐ in. **2)** 72 in. = ☐ ft. **3)** 15 yd. = ☐ ft.

4) 12 ft. = ☐ yd. **5)** 216 in. = ☐ yd. **6)** 21 ft. = ☐ yd.

7) 5 ft. = ☐ in. **8)** 24 ft. = ☐ yd. **9)** 3 yd. = ☐ in.

10) 2 yd. = ☐ ft. **11)** 6 ft. = ☐ in. **12)** 15 yd. = ☐ ft.

2 Compare the following measurements using >, < or =.

HINT: Convert to the same unit of measurement, then compare.

1) 19yd. ◯ 23 ft. **2)** 4 yd. ◯ 128 in. **3)** 4 ft. ◯ 45 in.

4) 17 ft. ◯ 220 in. **5)** 178 in. ◯ 5 yd. **6)** 235 in. ◯ 5 yd.

7) 16 ft. ◯ 5 yd. **8)** 94 in. ◯ 9 ft. **9)** 12 yd. ◯ 41 ft.

LINEAR MEASUREMENTS

1 Complete the table by converting feet yards and miles.

HINT) 3 feet(ft.) is equal to 1 yard (yd.), 1760 yards is equal to 1 mile(mi.)

1 mile		3 miles	4 miles	
	3,520 yards		7,040 yards	
5,280 feet		15,840 ft.		26,400 ft.

2 Convert the following linear measurements.

1) 2 mi. = _____ ft. **2)** 8800 yd. = _____ mi. **3)** 81 yd. = _____ ft.

4) 1760 yd. = _____ ft. **5)** 4 mi. = _____ yd. **6)** 504 yd. = _____ ft.

7) 261 ft. = _____ yd. **8)** 3 mi. = _____ yd. **9)** 1 mi. = _____ yd.

10) 96 yd. = _____ ft. **11)** 1/2 mi. = _____ yd. **12)** 211 yd. = _____ ft.

13) 3 mi. = _____ ft. **14)** 880 yd. = _____ mi. **15)** 2 mi. = _____ yd.

16) 5 mi. = _____ yd. **17)** 640 yd. = _____ ft. **18)** 3 mi. = _____ yd.

LINEAR MEASUREMENTS

1 Complete the table by converting inches, feet and yards.

HINT) 12 inches(in.) is equal to 1 foot(ft.), 3 feet is equal to 1 yard (yd.)

1 yard	2 yards		4 yards	
	6 feet			15 feet
36 inches		108 inches		

2 Convert the following linear measurements.

1) 12 in. = ☐ ft. **2)** 3ft. = ☐ in. **3)** 1 yd. = ☐ in.

4) 3 yd. = ☐ ft. **5)** 36 in. = ☐ yd. **6)** 4 yd. = ☐ ft.

7) 24 in. = ☐ ft. **8)** 3ft. = ☐ in. **9)** 3 yd. = ☐ in.

10) 6 yd. = ☐ ft. **11)** 36 ft. = ☐ yd. **12)** 216 in. = ☐ ft.

13) 10 ft. = ☐ in. **14)** 108 in. = ☐ yd. **15)** 4 ft. = ☐ in.

16) 5 yd. = ☐ in. **17)** 60 in. = ☐ ft. **18)** 8 ft. = ☐ in.

MEASURING TIME

1 Complete the table by converting seconds, minutes and hours.

Remember that every 60 seconds is equal to a minute and every 60 minutes is equal to an hour!

1/2 hour		2 hours
	60 minutes	
1800 seconds		

2 Convert the following time measurements.

1) 3 hours = _____ minutes

2) 21 minutes = _____ seconds

3) 5 minutes = _____ seconds

4) 11 hours = _____ minutes

5) 4 hours = _____ seconds

6) 900 seconds = _____ minutes

7) 65 minutes = _____ seconds

8) 540 minutes = _____ hours

9) 330 minutes = _____ hours

10) 5 hours = _____ minutes

11) 7 hours = _____ seconds

12) 21,600 seconds = _____ hours

13) 9 hours = _____ minutes

14) 720 minutes = _____ hours

15) $5\frac{1}{2}$ hours = _____ seconds

16) 45 minutes = _____ seconds

17) 12,600 seconds = _____ hours

18) 1230 minutes = _____ hours

MEASURING TIME

Convert the following time measurements.

HINT: A week is made of 7 days and a year is made of 365 days!

1) 1 year=_____week(s)_____day(s)

2) 2 years=_____day(s)

3) 392 days=_____week(s)

4) 89 weeks=_____ day(s)

5) 1825 days=_____year(s)

6) 3 years=_____day(s)

7) 1,460 days=_____year(s)

8) 623 days=_____ week(s)

9) 1 year, 2 weeks= _____ day(s)

10) 449 days =_____year(s) _____week(s)

11) 462 days= _____week(s)

12) 78 weeks= _____ day(s)

13) 36 weeks= _____ day(s)

14) 4550 days= _____week(s)

15) 823 days=_____year(s)_____day(s)

16) 4 years, 3 weeks=_____day(s)

17) 91 weeks, 6 days=_____day(s)

18) 3,471 days=____year(s) _____day(s)

19) 2 years, 65 weeks=_____day(s)

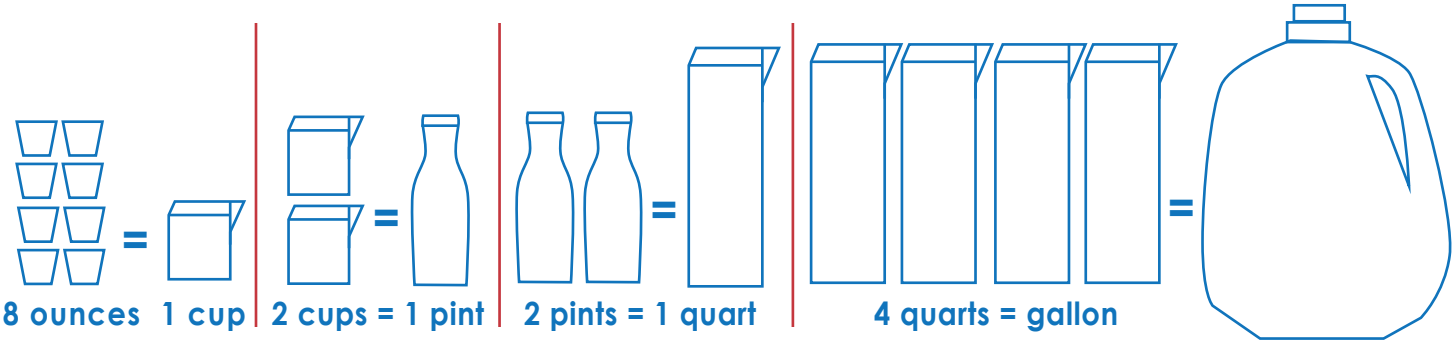
20) 684 days= _____week(s)_____day(s)

LIQUID CONVERSION

LEMONADE MANIA!

In one week Sarah was invited to five different parties. She volunteered to make lemonade for each party. Her mother told her that bringing 8 ounces per person would be enough. Calculate how much she has to bring to each party.

LEMONADE



DAY OF PARTY	MONDAY	TUESDAY	THURSDAY	FRIDAY	SATURDAY
HOW MANY PEOPLE ATTENDING	4 PEOPLE	8 PEOPLE	16 PEOPLE	32 PEOPLE	40 PEOPLE
HOW MUCH SHE NEEDS TO BRING in					
... ounces?	_____	_____	_____	_____	_____
... cups?	_____	_____	_____	_____	_____
... pints?	_____	_____	_____	_____	_____
... quarts?	_____	_____	_____	_____	_____
... gallons?	_____	_____	_____	_____	_____

RECIPE CONVERSION

CHOCOLATE CUPCAKES
serving 6 cupcakes

- 1 egg
- $\frac{3}{4}$ cup all purpose flour
- $\frac{1}{2}$ cup white sugar
- $\frac{1}{4}$ cup milk
- $\frac{1}{4}$ cup melted butter
- 2 tablespoons cocoa powder
- 2 teaspoons vanilla extract
- 1 teaspoon baking powder

Help Ally convert this recipe to make 24 cupcakes for the upcoming school bake sale. (1 cup = 16 tablespoons and 3 teaspoons = 1 tablespoon)

_____ eggs

_____ cup(s) all purpose flour

_____ cup(s) white sugar

_____ cup(s) milk

_____ cup(s) melted butter

_____ cup(s) cocoa powder

_____ tablespoon(s) & _____ teaspoon(s) vanilla extract

_____ tablespoon(s) & _____ teaspoon(s) baking powder

LIQUID MEASUREMENTS

1 Convert the following liquid measurements.

1) 13 pints = 1 gallon, _____ cup(s)

2) 2 quarts, 4 pints = _____ gallon(s)

3) 9 pints = 1 gallon, _____ cup(s)

4) 4 gallons = 30 pints, _____ cup(s)

5) 8 quarts, 8 pints = _____ gallon(s)

6) 4 pints, 8 cups = _____ gallons(s)

7) 30 pints = _____ gallon(s), _____ cup(s)

8) 21 cups = _____ pint(s) _____ cup(s)

9) 5 quarts, 6 pints = _____ gallon(s)

10) 24 quarts = 5 gallons, _____ pint(s)

11) 12 pints, 8 cups = _____ gallon(s)

12) 14 pints, 4 cups = _____ quart(s)

13) 32 cups, 8 pint = _____ gallon(s)

14) 6 pints, 4 cups = _____ quart(s)

15) 3 quarts = 5 pints, _____ cup(s)

16) 6 quarts 8 cups = _____ gallon(s)

17) 22 pints = _____ gallon(s) _____ cup(s)

18) 6 pints, 4 cups = _____ gallon(s)

2 Compare the following measurements using >, < or =.

1) 24 quarts ◯ 2 gal

2) 56 cups ◯ 30 pint

3) 23 quart ◯ 6 gal

4) 5 quarts ◯ 23 cups

5) 8 quart ◯ 34 cups

6) 36 pints ◯ 4.5 gal

7) 5 pints ◯ 10 cups

8) 12 qt, 5pt ◯ 4 gal

9) 5pt, 10 cups ◯ 1 gal

LIQUID MEASUREMENTS

1 Complete the table by converting cups, pints, quarts & gallons.

HINT) 2 cups = 1 pint (pt) 2 pints = 1 quart(qt) 4 quarts=1 gallon(gal)

1/8 gal	1/4 gal	1/2 gal		
		2 quarts		
1 pint			8 pints	
	4 cups		16 cups	32 cups

2 Convert the following liquid measurements.

1) 30 pints= ☐ cup(s) **2)** 17 pints= ☐ cup(s) **3)** 3 gal= ☐ quart(s)

4) 16 quarts= ☐ pint(s) **5)** 26 pints= ☐ quart(s) **6)** 21 quarts= ☐ cup(s)

7) 102 cups = ☐ pint(s) **8)** 32 quarts = ☐ gal. **9)** 56 pint = ☐ gal

10) 68 cups = ☐ quart(s) **11)** 72 quarts = ☐ gal **12)** 3 gal= ☐ cup(s)

13) 32 pint = ☐ gal **14)** 6 quart = ☐ cup(s) **15)** 12 quart= ☐ gal

16) 26 pint = ☐ gal **17)** 24 cups= ☐ gal **18)** 20 pint = ☐ gal

Who Ran the Farthest?

John and his friends were competing to see how far they could run in 10 minutes. John ran 1 mile, Terry ran 8,559 feet, and Jason ran 2,375 yards. Using these conversion tables, find out how far each boy ran.

1 mile	1 mile	1 yard
1,760 yards	5,280 feet	3 feet

John ran one mile = _____ yards = _____ feet.

Terry ran 8,559 feet = _____ mile(s) and _____ feet = _____ mile(s) and _____ yards = _____ yards.

Jason ran 2,375 yards = _____ mile(s) and _____ feet = _____ mile(s) and _____ yards = _____ feet.

In total, togehter they ran _____ mile(s) and _____ yards = _____ mile(s) and _____ feet = _____ yards = _____ feet.

LINEAR MEASUREMENTS

Convert the following linear measurements.

1) 1 mi. 100 yd. = _____ ft.

2) 15,327 ft. = _____ mi. _____ ft.

3) 32,256 ft. = _____ mi. _____ ft.

4) 1 mi. 450 ft. = _____ ft.

6) 2 mi. 150 yd. = _____ ft.

5) 25421 ft. = _____ mi. _____ ft.

7) 3 mi. 95 yd. = _____ ft.

8) 32651 ft.= _____ mi. _____ ft.

9) 1 mi. 420 ft. = _____ yd.

10) 2 mi. 615 ft. = _____ yd.

11) 2 mi. 250 yd. = _____ ft.

12) 2060 yd. = _____ mi. _____ ft.

13) 25347 ft. = _____ mi. _____ ft.

14) 3 mi. 710 ft. = _____ ft.

15) 4 mi. 430 yd.= _____ ft.

16) 2 mi. 234 ft = _____ ft.

17) 1 mi. 1250 yd. = _____ ft.

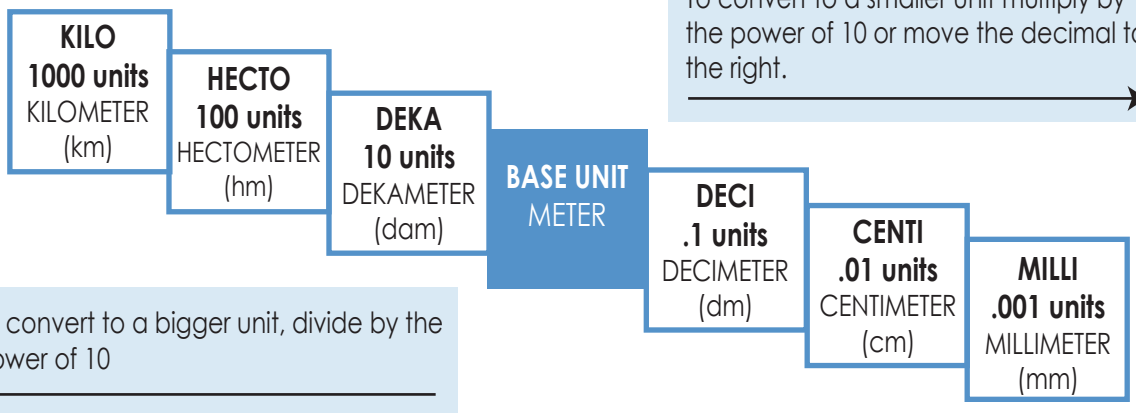
18) 63,416 ft.= _____ mi. _____ ft.

19) 3 mi. 255 ft. = _____ yd.

20) 13,415 ft = _____ mi. _____ ft.

LINEAR MEASUREMENTS

A simple way to remember the metric system is remembering the ladder method.



How do you use the "Ladder Method"?

1) Figure out a starting point.
2) Count the "jumps" to your end point.
3) Multiply or divide by 10 in the power of every "jump"

EXAMPLE : 4 m = mm

staring point — ending point

1)
2) It takes 3 "jumps" to get from meter to millimeter
3) **4.0m = 4.0.0.0 mm = 4,000.0 mm**

$\times 10^3$ — 3 hops

Convert the following measurements using the ladder method.

1) 1 km = _____ dm **2)** 6 m = _____ hm **3)** 426 dm = _____ mm

4) 4 m = _____ cm **5)** 90 cm = _____ dm **6)** 800000 mm = _____ hm

7) 24 cm = _____ dam **8)** 42 dam = _____ km **9)** 45 m = _____ dam

10) 400 mm = _____ m **11)** 3.6 hm = _____ cm **12)** 2.1 km = _____ mm

13) 9 m = _____ mm **14)** 188 cm = _____ m **15)** 345 dm = _____ km

"No-Bake" Cookies!

Budding bakers can explore the excitement of the kitchen without fear of cuts or hot ovens by making these super simple and tasty cookies. She'll hone her culinary skills and learn more about the wonders of baking!

What You Need:

- Medium mixing bowl
- Spatula
- ½ c butter
- 1 ½ c sugar
- ½ c milk
- 1 c peanut butter
- 5 Tbsp cocoa
- 1 tsp vanilla
- 3 c oats
- Small saucepan
- Sheet pan
- Aluminum foil

What You Do:

1. Invite your child to measure and add the butter, sugar, and milk to a small saucepan and begin heating over low heat. She can use a spatula to stir things together as needed.
2. While the butter is melting, your child can measure and add the oats to a large bowl. Along with exploring cooking techniques she's learning more about math concepts!
3. Now she can measure and add the peanut butter and cocoa powder to the melted butter, along with turning the heat up to medium. She can keep stirring the ingredients until they begin to boil lightly. Offer adult assistance as needed.
4. Invite your child to turn off the heat and let the hot mixture cool for about 5 minutes before moving on to the next step.
5. Now your child can add the warm mixture to the oats and stir together using the spatula. Offer adult assistance as needed.
6. Encourage her to let the mixture cool while covering the sheet pan with aluminum foil.
7. Offer your child a spoon and encourage her to scoop spoonfuls of the mixture onto the sheet pans and then placing in the fridge to set up for at least an hour.

These chocolaty no-bake cookies should be kept in the fridge for maximum tastiness.

Metric Conversion Game

Most kids in the U.S. don't have nearly enough experience using the metric system. Sure, when science class roles around they'll have to use centimeters and millimeters, but they really could use more practice. The metric system is very important and knowledge of it will prove useful, especially later on in life. Give this game a try and help your child master metric measurements.

What You Need:

- 1 sheet white paper
- 1 black marker
- 1 friend

What You Do:

1. Let your child draw a standard nine-square tic-tac-toe grid on the sheet of white paper using the black marker.

2. Have your kid use the left side of the following chart and the black marker to fill each of the squares in the grid randomly. This chart can also be the gamekeeper's cheat sheet during game play.

1 millimeter = 0.001 meter

1 centimeter = 0.01 meter

1 decimeter = 0.1 meter

1 decameter = 10 meters

1 hectometer = 100 meters

1 kilometer = 1000 meters

You'll want to fill it out in such a way that each square contains a single figure. For example, you could write *millimeter* in the top left square, *decameter* in the top center square, *centimeter* in the top right square, *100 meters* in the center square and so on. Try to be as random as possible.

3. To play the game, your child and her friend should decide who will go first.

4. The child who goes first should pick a random square and then try and convert it to or from meters. For example, if she picks a square that contains the term hectometer, she needs to correctly guess how many meters a hectometer equals.

5. If she guesses correctly, she gets to write an X or an O in the square.

6. Then, the next child should take his turn.

7. The game continues until someone gets three squares in a row. Whoever gets three squares in a row first—wins!

8. The best part is that this game could easily be converted to other metric measurements (liters, grams) instead of meters for added replayability.

Math Review:

Here are some more conversions in case you want to mix it up a little:

- 1 m = 10 dm (For example, 4 m x 10 = 40 dm)
- 1 m = 100 cm (For example, 4 m x 100 = 400 cm)
- 1 m = 1000 mm (For example, 4 m x 1000 = 4000 mm)
- 100 m = 1 hm (For example, 4 m / 100 = .04 hm)
- 1000 m = 1 km (For example, 4 m / 1000 = .004 km)

Great job!

_____

is an Education.com math superstar

Answer Sheets

Liquid and Linear Measurement

Answer Sheet

LINEAR MEASUREMENTS

METRIC

1 Convert the following measurements.

1) .6 dm = 60 mm 2) 7.2 km = 7,200 m 3) 4.2 m = 420 cm

4) 2.8km = 2,800 m 5) 898 km = 898,000 m 6) 9325 cm = 93.25 m

7) .51 km = 5,100 dm 8) 175 mm = .0175 dam 9) 916 km = 916,000 m

10) 830 mm = .083 dam 11) 36 hm = 360,000 cm 12) 2.1 km = 210,000 cm

13) 916.5 km = 916,500 m 14) 188 cm = 1.8 m 15) 345 dm = .0345 km

16) 8.1 dam = 8,100 cm 17) 8921.5 m = 892,150 cm 18) 35.8 m = 35,800 mm

2 Compare the following measurements using >, < or =.

1) 9900 cm (=) 99 m 2) 4000 mm (>) 4 dm 3) 5 dam (<) 4133dm

4) 2.4 km (>) 2400 mm 5) 3.51m (>) 351 hm 6) 34.1m (<) 34100cm

7) 2341 dam (>) 2.4 km 8) 72hm. (=) 7200 m 9) 1.2km (>) 1200dm

Answer Sheet

LINEAR MEASUREMENTS

1 Convert the following linear measurements.

HINT: 12 inches(in.) is equal to 1 foot(ft.), 3 feet is equal to 1 yard (yd.)

1) 2 yd. = **72** in. **2)** 72 in. = **6** ft. **3)** 15 yd. = **45** ft.

4) 12 ft. = **4** yd. **5)** 216 in. = **6** yd. **6)** 21 ft. = **7** yd.

7) 5 ft. = **60** in. **8)** 24 ft. = **8** yd. **9)** 3 yd. = **108** in.

10) 2 yd. = **6** ft. **11)** 6 ft. = **72** in. **12)** 15 yd. = **45** ft.

2 Compare the following measurements using >, < or =.

HINT: Convert to the same unit of measurement, then compare.

1) 19yd. **>** 23 ft. **2)** 4 yd. **>** 128 in. **3)** 4 ft. **>** 45 in.

4) 17 ft. **<** 220 in. **5)** 178 in. **<** 5 yd. **6)** 235 in. **>** 5 yd.

7) 16 ft. **>** 5 yd. **8)** 94 in. **<** 9 ft. **9)** 12 yd. **<** 41 ft.

Answer Sheet

LINEAR MEASUREMENTS

1 Complete the table by converting feet yards and miles.

HINT) 3 feet(ft.) is equal to 1 yard (yd.), 1760 yards is equal to 1 mile(mi.)

1 mile	2 miles	3 miles	4 miles	5 miles
1760 yards	3,520 yards	5,280 yards	7,040 yards	8800 yards
5,280 feet	10,560 ft.	15,840 ft.	21,120 ft.	26,400 ft.

2 Convert the following linear measurements.

1) 2 mi. = 10,560 ft. **2)** 8800 yd. = 5 mi. **3)** 81 yd. = 243 ft.

4) 1760 yd. = 5280 ft. **5)** 4 mi. = 7040 yd. **6)** 504 yd. = 1512 ft.

7) 261 ft. = 87 yd. **8)** 3 mi. = 5280 yd. **9)** 1 mi. = 1760 yd.

10) 96 yd. = 288 ft. **11)** 1/2 mi. = 880 yd. **12)** 211 yd. = 633 ft.

13) 3 mi. = 15,840 ft. **14)** 880 yd. = 1/2 mi. **15)** 2 mi. = 3,520 yd.

16) 5 mi. = 8800 yd. **17)** 640 yd. = 1920 ft. **18)** 3 mi. = 5,280 yd.

Answer Sheet

LINEAR MEASUREMENTS

1 **Complete the table by converting inches, feet and yards.**

HINT) 12 inches (in.) is equal to 1 foot (ft.), 3 feet is equal to 1 yard (yd.)

1 yard	2 yards	3 yards	4 yards	5 yards
3 feet	6 feet	9 feet	12 feet	15 feet
36 inches	72 inches	108 inches	144 inches	180 inches

2 **Convert the following linear measurements.**

1) 12 in. = **1** ft. **2)** 3ft. = **36** in. **3)** 1 yd. = **36** in.

4) 3 yd. = **9** ft. **5)** 36 in. = **1** yd. **6)** 4 yd. = **12** ft.

7) 24 in. = **2** ft. **8)** 3ft. = **36** in. **9)** 3 yd. = **108** in.

10) 6 yd. = **18** ft. **11)** 36 ft. = **12** yd. **12)** 216 in. = **18** ft.

13) 10 ft. = **120** in. **14)** 108 in. = **3** yd. **15)** 4 ft. = **48** in.

16) 5 yd. = **180** in. **17)** 60 in. = **5** ft. **18)** 8 ft. = **96** in.

Answer Sheet

MEASURING TIME

1 Complete the table by converting seconds, minutes and hours.

Remember that every 60 seconds is equal to a minute and every 60 minutes is equal to an hour!

1/2 hour	1 hour	2 hours
30 minutes	60 minutes	120 minutes
1800 seconds	3600 seconds	7200 seconds

2 Convert the following time measurements.

1) 3 hours = 180 minutes

2) 21 minutes = 1,260 seconds

3) 5 minutes = 500 seconds

4) 11 hours = 660 minutes

5) 4 hours = 14,400 seconds

6) 900 seconds = 15 minutes

7) 65 minutes = 3,900 seconds

8) 540 minutes = 9 hours

9) 330 minutes = $5\frac{1}{2}$ hours

10) 5 hours = 300 minutes

11) 7 hours = 25,200 seconds

12) 21,600 seconds = 6 hours

13) 9 hours = 540 minutes

14) 720 minutes = 12 hours

15) $5\frac{1}{2}$ hours = 19,800 seconds

16) 45 minutes = 2,700 seconds

17) 12,600 seconds = $3\frac{1}{2}$ hours

18) 1230 minutes = $20\frac{1}{2}$ hours

Answer Sheet

MEASURING TIME

Convert the following time measurements.

HINT: A week is made of 7 days and a year is made of 365 days!

1) 1 year= 52 week(s) 1 day(s)

2) 2 years= 730 day(s)

3) 392 days= 56 week(s)

4) 89 weeks= 623 day(s)

5) 1825 days= 5 year(s)

6) 3 years= 1095 day(s)

7) 1,460 days= 4 year(s)

8) 623 days= 89 week(s)

9) 1 year, 2 weeks= 379 day(s)

10) 449 days = 1 year(s) 12 week(s)

11) 462 days= 66 week(s)

12) 78 weeks= 546 day(s)

13) 36 weeks= 252 day(s)

14) 4550 days= 650 week(s)

15) 823 days= 2 year(s) 93 day(s)

16) 4 years, 3 weeks= 1,481 day(s)

17) 91 weeks, 6 days= 643 day(s)

18) 3,471 days= 9 year(s) 186 day(s)

19) 2 years, 65 weeks= 1,185 day(s)

20) 684 days= 97 week(s) 5 day(s)

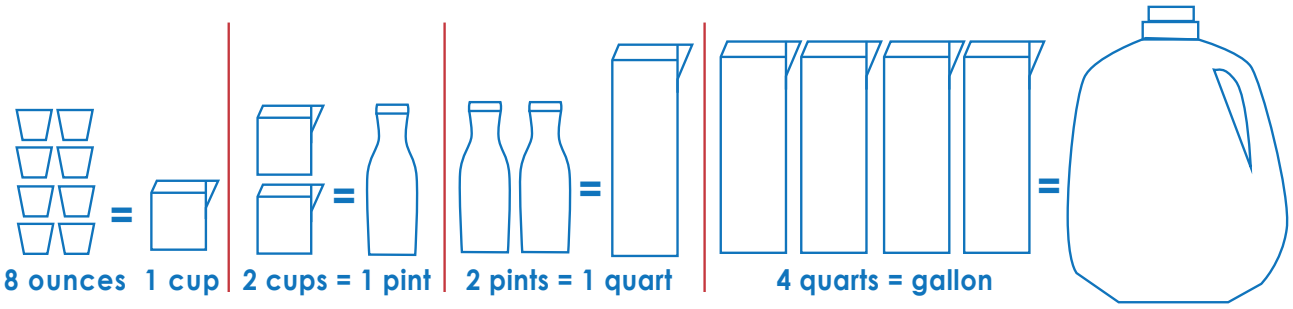
Answer Sheet

LIQUID CONVERSION

LEMONADE MANIA!

In one week Sarah was invited to five different parties. She volunteered to make lemonade for each party. Her mother told her that bringing 8 ounces per person would be enough. Calculate how much she has to bring to each party.

LEMONADE



DAY OF PARTY	MONDAY	TUESDAY	THURSDAY	FRIDAY	SATURDAY
HOW MANY PEOPLE ATTENDING	4 PEOPLE	8 PEOPLE	16 PEOPLE	32 PEOPLE	40 PEOPLE
HOW MUCH SHE NEEDS TO BRING in					
... ounces?	32	64	128	256	320
... cups?	4	8	16	32	40
... pints?	2	4	8	16	20
... quarts?	1	2	4	8	10
... gallons?	$\frac{1}{4}$	$\frac{1}{2}$	1	2	$2\frac{1}{2}$

Answer Sheet

RECIPE CONVERSION

CHOCOLATE CUPCAKES
serving 6 cupcakes

- 1 egg
- $\frac{3}{4}$ cup all purpose flour
- $\frac{1}{2}$ cup white sugar
- $\frac{1}{4}$ cup milk
- $\frac{1}{4}$ cup melted butter
- 2 tablespoons cocoa powder
- 2 teaspoons vanilla extract
- 1 teaspoon baking powder

Help Ally convert this recipe to make 24 cupcakes for the upcoming school bake sale.

4 eggs

3 cup(s) all purpose flour

2 cup(s) white sugar

1 cup(s) milk

1 cup(s) melted butter

$\frac{1}{2}$ cup(s) cocoa powder

2 tablespoon(s) & 2 teaspoon(s) vanilla extract

1 tablespoon(s) & 1 teaspoon(s) baking powder

Answer Sheet

LIQUID MEASUREMENTS

1 Convert the following liquid measurements.

1) 13 pints = 1 gallon, 10 cup(s)

2) 2 quarts, 4 pints = 1 gallon(s)

3) 9 pints = 1 gallon, 2 cup(s)

4) 4 gallons = 30 pints, 4 cup(s)

5) 8 quarts, 8 pints = 3 gallon(s)

6) 4 pints, 8 cups = 1 gallons(s)

7) 30 pints = 3 gallon(s), 12 cup(s)

8) 21 cups = 10 pint(s) 1 cup(s)

9) 5 quarts, 6 pints = 2 gallon(s)

10) 24 quarts = 5 gallons, 8 pint(s)

11) 12 pints, 8 cups = 2 gallon(s)

12) 14 pints, 4 cups = 8 quart(s)

13) 32 cups, 8 pint = 3 gallon(s)

14) 6 pints, 4 cups = 4 quart(s)

15) 3 quarts = 5 pints, 2 cup(s)

16) 6 quarts 8 cups = 2 gallon(s)

17) 22 pints = 2 gallon(s) 12 cup(s)

18) 6 pints, 4 cups = 1 gallon(s)

2 Compare the following measurements using >, < or =.

1) 24 quarts (>) 2 gal

2) 56 cups (<) 30 pint

3) 23 quart (<) 6 gal

4) 5 quarts (<) 23 cups

5) 8 quart (<) 34 cups

6) 36 pints (=) 4.5 gal

7) 5 pints (=) 10 cups

8) 12 qt, 5pt (<) 4 gal

9) 5pt, 10 cups (>) 1 gal

Answer Sheet

LIQUID MEASUREMENTS

1 **Complete the table by converting cups, pints, quarts & gallons.**

HINT) 2 cups = 1 pint (pt) 2 pints = 1 quart(qt) 4 quarts=1 gallon(gal)

1/8 gal	1/4 gal	1/2 gal	1 gal	2 gal
1/2 quarts	1 quarts	2 quarts	4 quarts	8 quarts
1 pint	2 pints	4 pints	8 pints	16 pints
2 cups	4 cups	8 cups	16 cups	32 cups

2 **Convert the following liquid measurements.**

1) 30 pints= 60 cup(s) **2)** 17 pints= 34 cup(s) **3)** 3 gal= 12 quart(s)

4) 16 quarts= 32 pint(s) **5)** 26 pints= 13 quart(s) **6)** 21 quarts= 84 cup(s)

7) 102 cups = 51 pint(s) **8)** 32 quarts = 8 gal. **9)** 56 pint = 7 gal

10) 68 cups = 17 quart(s) **11)** 72 quarts = 18 gal **12)** 3 gal= 48 cup(s)

13) 32 pint = 4 gal **14)** 6 quart = 24 cup(s) **15)** 12 quart= 3 gal

16) 26 pint = $3\frac{1}{4}$ gal **17)** 24 cups= $1\frac{1}{2}$ gal **18)** 20 pint = $2\frac{1}{2}$ gal

Answer Sheet

Who Ran the Farthest?

John and his friends were competing to see how far they could run in 10 minutes. John ran 1 mile, Terry ran 8,559 feet, and Jason ran 2,375 yards. Using these conversion tables, find out how far each boy ran.

1 mile	1 mile	1 yard
1,760 yards	5,280 feet	3 feet

John ran one mile = 1,760 yards = 5,280 feet.

Terry ran 8,559 feet = 1 mile(s) and 3,279 feet = 1 mile(s) and 1,093 yards = 2,853 yards.

Jason ran 2,375 yards = 1 mile(s) and 1,845 feet = 1 mile(s) and 615 yards = 7,125 feet.

In total, togehter they ran 3 mile(s) and 1,708 yards = 3 mile(s) and 5,124 feet = 6,988 yards = 20,964 feet.

Answer Sheet

LINEAR MEASUREMENTS

Convert the following linear measurements.

1) 1 mi. 100 yd. = 5,380 ft.

2) 15,327 ft. = 2 mi. 4,767 ft.

3) 32,256 ft. = 6 mi. 576 ft.

4) 1 mi. 450 ft. = 5730 ft.

6) 2 mi. 150 yd. = 11,010 ft.

5) 25421 ft. = 4 mi. 4,301 ft.

7) 3 mi. 95 yd. = 16,125 ft.

8) 32651 ft.= 6 mi. 971 ft.

9) 1 mi. 420 ft. = 1,900 yd.

10) 2 mi. 615 ft. = 3,725 yd.

11) 2 mi. 250 yd. = 11,310 ft.

12) 2060 yd. = 1 mi. 900 ft.

13) 25347 ft. = 4 mi. 4,227 ft.

14) 3 mi. 710 ft. = 16,550 ft.

15) 4 mi. 430 yd.= 22,410 ft.

16) 2 mi. 234 ft = 10,794 ft.

17) 1 mi. 1250 yd. = 9,030 ft.

18) 63,416 ft.= 12 mi. 56 ft.

19) 3 mi. 255 ft. = 5,365 yd.

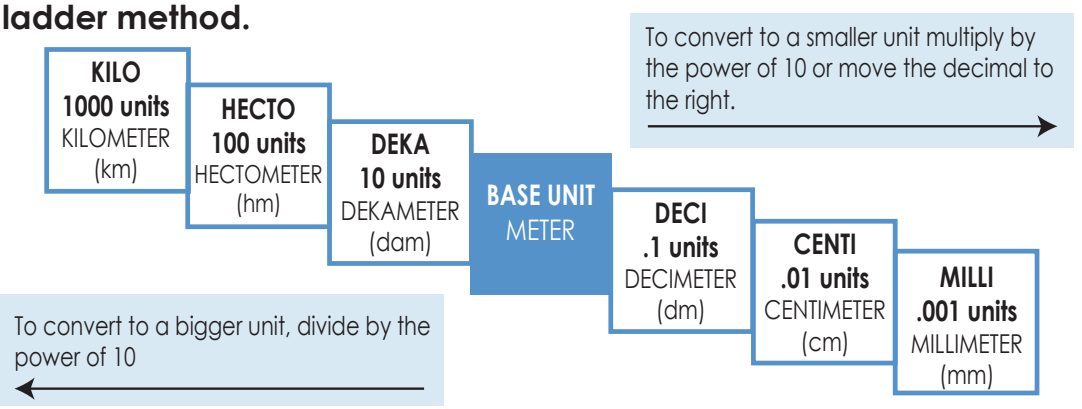
20) 13,415 ft = 2 mi. 2,855 ft.

Answer Sheet

LINEAR MEASUREMENTS

METRIC

A simple way to remember the metric system is remembering the ladder method.



How do you use the "Ladder Method"?

1) Figure out a starting point.
2) Count the "jumps" to your end point.
3) Multiply or divide by 10 in the power of every "jump"

EXAMPLE : 4 m = mm

staring point — ending point

1)
2) It takes 3 "jumps" to get from meter to millimeter
3) **4.0m = 4.0.0.0 mm = 4,000.0 mm**

$\times 10^3$ — 3 hops

Convert the following measurements using the ladder method.

1) 1 km = 10,000 dm
2) 6 m = .06 hm
3) 426 dm = 42,600 mm
4) 4 m = 400 cm
5) 90 cm = 9 dm
6) 800000 mm = 8 hm
7) 24 cm = .024 dam
8) 42 dam = .42 km
9) 45 m = 4.5 dam
10) 400 mm = .4 m
11) 3.6 hm = 36,000 cm
12) 2.1 km = 2,100,000 mm
13) 9 m = 9,000 mm
14) 188 cm = 1.88 m
15) 345 dm = .0345 km