4th
Basic

5th
Advanced

Helping With Math

USA
GRADES

Conversion of Unlike Units (Measures of Distance)

Suitable for students
aged 8-10

This pack is suitable for learners aged 8-10 years old or 4th to 5th graders (USA). The content covers fact files and relevant basic and advanced activities involving conversion of unlike units (measures of distance).

During National Aviation Day, the pilot flew 1,235 km. If converted to meters and foot, what are the values?

1,235 km = 1,235,000 m
● 1,235 x 1,000

1,235 km = 4,051,837 ft
● 1,235 x 3,281
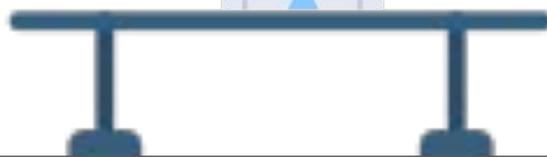
Every 19th of August, we celebrate National Aviation Day. Now, using the distance measurement, we get to measure how far are places from each other.! We can convert them to different units like kilometer, meter, yard, inch, etc.

MEASURES OF DISTANCE CONVERSION TABLE
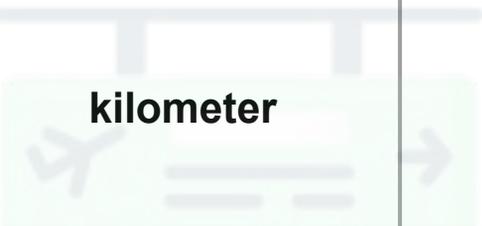
MEASUREMENT OF DISTANCE		
kilometer	km	1 km = 1,000 m, 10,000 cm, 0.54 nmi, 0.62 mi, 1,093.61 yd, 3,280.84 ft, 39,370 in
meter	m	1 m = 100 cm, 0.001 km, 0.0005 nmi, 0.0006 mi, 1.09 yd, 3.28 ft, 39.37 in
centimeter	cm	1 cm = 0.01 m or 0.0001 km, 5.40 nmi, 6.21 mi, 0.01 yd, 0.03 ft, 0.39 in
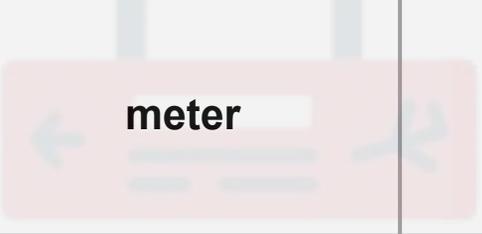
nautical mile	nmi	1 nmi = 1.85 km, 1,852 m, 185,200 cm, 1.15 mi, 2,025.37 yd, 6,076.12 ft, 72,913.4 in
mile	mi	1 mi = 1.61 km, 1,609.34 m, 160,934 cm, 0.87 nmi, 1,760 yd, 5,280 ft, 63,360 in

MEASURES OF DISTANCE CONVERSION TABLE

MEASUREMENT OF DISTANCE		
yard	yd	1 yd = 0.0009 km, 0.91 m, 91.44 cm, 0.0004 nmi, 0.0005 mi, 3 ft, 36 in
foot	ft	1 ft = 0.0003 km, 0.30 m, 30.48 cm, 0.00016 nmi, 0.00019 mi, 0.33 yd, 12 in
inch	in	1 in = 0.00002 km, 0.03 m, 2.54 cm, 1.37 nmi, 1.58 mi, 0.027 yd, 0.083 ft

EXERCISES

39 in	_____ ft
54 yd	_____ mi
103 nmi	_____ cm
255 m	_____ yd
99 km	_____ nmi

TABLE OF ACTIVITIES

Ages 8-9 (Basic)	4th Grade
1	Convert and Recline
2	Radar
3	Do the Puzzle to Travel
4	The Pilot's Decision
5	National Aviation Day
Ages 9-10 (Advanced)	**5th Grade**
6	Nautical Miles Errand
7	Aviation Day
8	Pilot's Dilemma
9	Around the World
10	Fly High

Want to recline your plane seat? Try to convert the following measures into its desired unit.

1) 76 yd = _____ m

Solution:

2) 48 yd = _____ m

Solution:

3) 92 yd = _____ m

Solution:

4) 63 yd = _____ m

Solution:

RADAR

Find out what the radar has detected! Convert these from foot to yard or vice versa.

1) 75 ft = _____ yd

2) 45 ft = _____ yd

3) 63 ft = _____ yd

4) 18 ft = _____ yd

5) 36 ft = _____ yd

6) 30 yd = _____ ft

7) 19 yd = _____ ft

8) 10 yd = _____ ft

9) 31 yd = _____ ft

10) 18 yd = _____ ft

Solution:

DO THE PUZZLE TO TRAVEL

Complete this crossword puzzle to arrive with your destination! Oops! Remember to bring your passport.
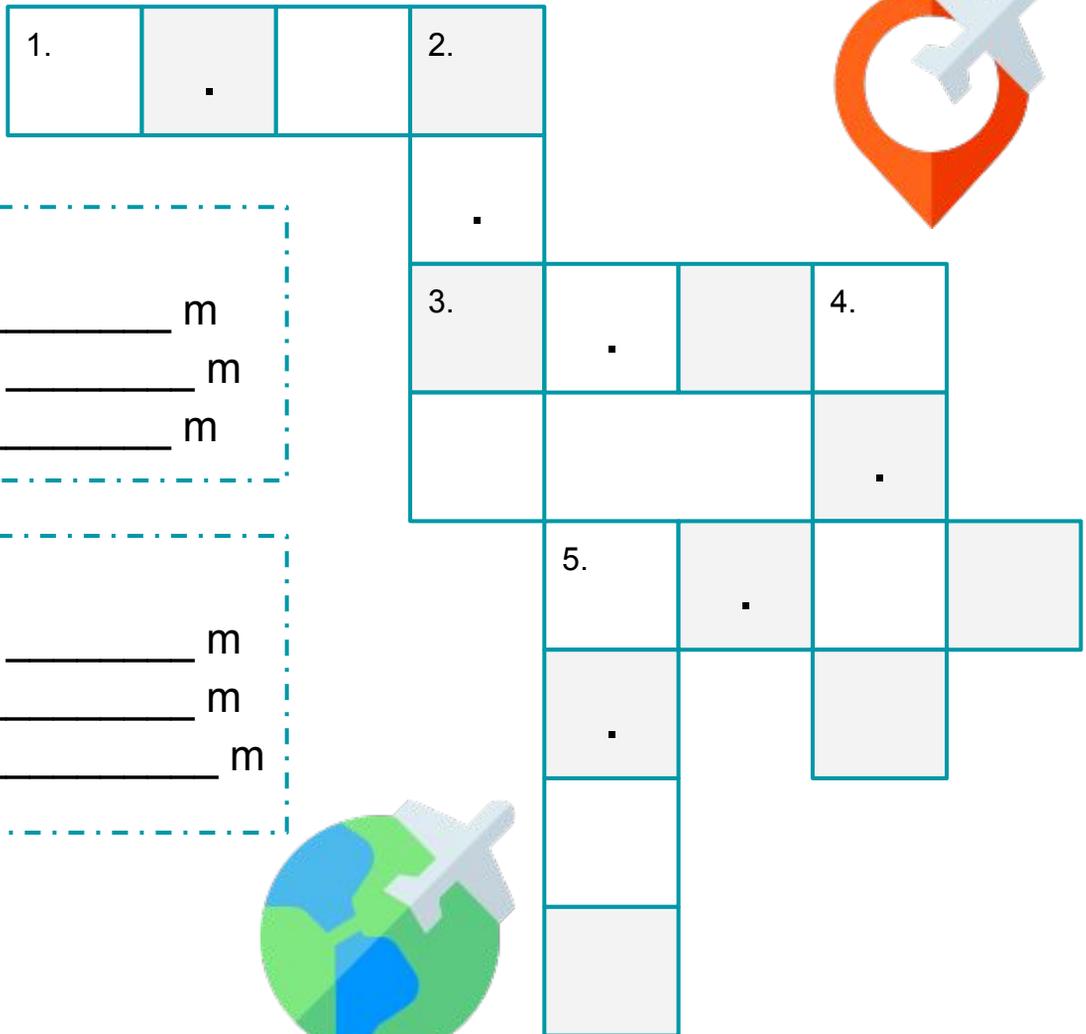
Horizontal:
1. 21 in = _____ m
3. 245 in = _____ m
5. 18 in = _____ m

Vertical:
2. 145 in = _____ m
4. 96 in = _____ m
5. 31 in = _____ m

Solution:

THE PILOT'S DECISION

Help the pilot identify if the statements are correct or not. Encircle True if the statement is right. Otherwise, choose False and underline the word/number that is incorrect then show how you get your answer.

1) The first airplane is now seventy-three kilometers away from the airport. When converted to miles, it will result to forty-three and fifty-six.

True or False

Solution:

True or False

2) The second airplane is fifty-two kilometers away from the first. When converted to miles, it will result to thirty-one and thirty-two.

Solution:

3) The third airplane is forty-nine kilometers away from its destination. When converted to miles, it will result to thirty-four and fifty.

True or False

Solution:

Help Pilot Derek win the grand prize! Convert these measurements into km and nmi.

1) 7,233 mi =

_____ km

Solution:

2) 7,233 mi =

_____ nmi

Solution:

Pilot Derek Shepherd won the grand prize in the National Aviation Day raffle. He won a trip to China which is 7,233 mi away from his home country, the USA. As part of his continuous learning, convert the miles to kilometers and nautical miles.

NAUTICAL MILES ERRAND

This National Aviation Day, solve the following problems. Choose the letter of your answer and show your solution.

1) Which of the following kilometers will result to 57 nautical miles?

a.   155.06   c.   156.50

b.   105.56   d.   150.56

Solution:

Solution:

2) Among the following kilometers, what will result to 89 nautical miles?

a.   164.83   c.   164.38

b.   146.83   d.   146.38

3) Which among the kilometers is equivalent to 63 nautical miles?

a.   116.86   c.   161.86

b.   161.68   d.   116.68

Solution:

AVIATION DAY

Let us solve some aviation-related problems today! Make sure to get it all correct!

1. The average cruising airspeed for a commercial passenger aircraft that flies long distances is approximately 880–926 km/h. If Aircraft A is travelling in a constant speed of 880 km/h, how much distance did it cover in a 2-hour flight? Express your answer in miles unit.

2. In relation to item number 1, if Aircraft B is travelling in a constant speed of 905 km/h, how much distance did it cover in a 1.5-hour flight? Express your answer in miles unit.

PILOT'S DILEMMA

As part of the celebration, follow the pilot's instructions by providing what is needed in the table below.

Create a paper plane. Mark your point of origin and throw your paper plane as far as you can. Afterwards, measure the distance from your point of origin to where the plane is landed and convert it to its unlike unit. You have three attempts.

English Unit Distance	Metric Unit Distance	Attempt

AROUND THE WORLD

To celebrate National Aviation Day, search the distance of the following places then convert it to any of the metric and english units below.

MEASURING DISTANCE

Tasks	Metric Unit	English Unit
The distance of Japan to Indonesia.		
The distance of Philippines to USA.		
The distance of United Kingdom to Korea.		
The distance of China to Egypt.		

FLY HIGH

Do you want to fly a plane someday? Answer these essay questions to reflect about the lesson for today.

1. When do you most commonly use the concept of measurements of distance?

2. What is/are the benefit/s of knowing how to convert one unit to another in the context of distance?
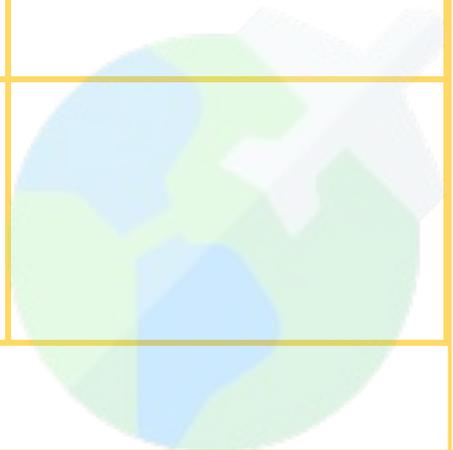
ANSWER GUIDE

Activity 1

1. 69.50 m
2. 43.89 m
3. 84.12 m
4. 57.61 m

Activity 2

1. 25 yd
2. 15 yd
3. 21 yd
4. 6 yd
5. 12 yd
6. 89 ft
7. 58 ft
8. 29 ft
9. 94 ft
10. 54 ft

Activity 3

Horizontal:
1. 0.53 m
3. 6.22 m
5. 0.46 m

Vertical:
2. 3.68 m
4. 2.44 m
5. 0.79 m

Activity 4

1. False: 45.36
2. False: 32.31
3. False: 30.45

Activity 5

1. 11,640.39 km
2. 6,285.31 nmi

Activity 6

1. B
2. A
3. D

Activities 8-10

Answers may vary.

Activity 7

1. 1. 1091.2 miles
2. 2. 841.65 miles

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