lin = 2,54 cm 1yd = 3ft

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AC Algebra 1/Geometry A

Name:\_\_\_\_\_

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**Unit Conversion Practice** 

## Solve the unit conversion problem by cross canceling units.

1 me ter = 100 cm

## Hint: Same units should be diagonal from each other

1 yard to centimeters 1 yard to tentimeters 1 yard to tentimeters 1 yard to 1 ya	Problem	Conversion work and answer (circle your answer, use units)	]		
centimeters $I_{VX} = 3 f_{X} + 12 i_{X} + 25 f_{X} = 91.44 \text{ cm}$ I of feet to meters and centimeters $I_{YX} = 3 f_{X} + 12 i_{X} + 254 f_{X} + 1 m$ $I_{YX} = 10 \text{ cm} + 1 \text{ m}$ $I_{YX} = 12 i_{X} + 254 f_{X} + 1 m$ $I_{YX} = 100 \text{ m} = 304.8 \text{ m} = 304.8 \text{ m}$ $I_{YX} = 12 i_{X} + 254 f_{X} + 1 m$ $I_{YX} = 100 \text{ m} = 304.8 \text{ m} = 304.8 \text{ m}$ $I_{YX} = 12 i_{X} + 254 f_{X} + 100 \text{ m} = 100 \text{ m} = 304.8 \text{ m}$ $I_{YX} = 100 \text{ m} = 100 \text{ m} = 304.8 \text{ m} = 304.8 \text{ m}$ $I_{YX} = 100 \text{ m} = 100 \text{ m} = 100 \text{ m} = 304.8 \text{ m}$ $I_{YX} = 100 \text{ m} = 100 \text{ m} = 304.8 \text{ m} = 304.8 \text{ m}$ $I_{YX} = 100 \text{ m} = 12 \text{ m} + 254 \text{ m} + 100 \text{ m} = 100 \text{ m} = 100 \text{ m} = 100 \text{ m} = 100 \text{ m}$ $I_{YX} = 12 \text{ m} + 254.6 \text{ m} + 100 \text{ m} = 1524 \text{ m} = 1524 \text{ m} = 1524 \text{ m} = 1524.6 \text{ m} = 152.24 \text{ m} = 152$	1 yard to	$4d \rightarrow f + -\pi in \rightarrow c m$	1		
10 feet to meters and centimeters 10 feet to meters and centimeters 10 fet . 12 in . 254 cm . 1 m = 304.8 m = 3.048 m 9 yards to meters and centimeters 9 yards to meters and entimeters 9 yards to meters and 1 fet . 1 in . 100 cm = 304.8 m = 3.048 m 1 fet . 1 in . 100 cm = 3.04.8 m = 3.048 m 1 fet . 1 in . 2.54 cm . 1 m 100 cm = 100 cm = 822.96 100 cm = 100 cm = 100 cm = 822.96 100 cm = 100 cm 100 cm = 100 cm = 100 cm = 100 cm 100 cm = 15.24 m 24 ft/secto miles/minute 24 ft/secto 1 fet . 1 mile . 254 cm miles . 24 m 1 sec . 5260 fet . 12 in . 2.54 cm m 1 sec . 5260 fet . 12 in . 254 cm miles . 27 miles/m 34 miles to inches 1 mile . 7 fet . 10 mile . 12 in . 215 4240 in 27 yards/minute 27 yards . 3 fet . 1 mile . 1 fet . 215 4240 in 27 yards . 3 fet . 1 mile . 1 fet . 215 4240 in 27 yards . 3 fet . 1 mile . 1 fet . 215 4240 in 27 yards . 3 fet . 1 mile . 1 fet . 215 4240 in 27 yards . 3 fet . 1 mile . 1 fet . 200 fet . 12 in . 215 4240 in 27 yards . 3 fet . 1 mile . 1 fet . 200 fet . 12 in . 215 4240 in 27 yards . 3 fet . 1 mile	centimeters	14x 3 fx 12 in 2.54cm - 91.44 cm			
10 feet to meters and entimeters 10 $\frac{ft}{pt}$ , $\frac{1}{12}\frac{ir}{ir}$ , $\frac{2}{254}\frac{cm}{m}$ , $\frac{1}{100}\frac{m}{m}$ , $\frac{304.8}{100}m$ , $\frac{1}{m}$ , $\frac{1}{12}\frac{m}{ir}$ , $\frac{2}{100}\frac{m}{m}$ , $\frac{1}{100}\frac{m}{m}$ , $\frac$		Jo Jud I Pr Lin			
meters and centimeters $10 + 7 \text{ in} + 9 \text{ cm} + \text{meters} 1 \text{ m} = 304.8 \text{ m} = 3.048 \text{ m}$ 9 yads to meters and $9 \text{ yds} = 7 + 7 \text{ in} + 7 \text{ cm} + 7 \text{ m} + 254 \text{ cm} \text{ m} = 12 \text{ m} \text{ m} = 254 \text{ cm} \text{ m} = 822.96 \text{ m}$ centimeters $9 \text{ yds} = 3 \text{ pt} = 12 \text{ m} \text{ m} 254 \text{ cm} \text{ m} = 100 \text{ gm} = \frac{822.96}{100} \text{ m} = \frac{822.96}{100} \text{ m} = \frac{1000 \text{ gm}}{1000 \text{ gm}} = \frac{1000 \text{ gm}}{1000 \text{ gm}} = \frac{822.96}{1000} \text{ m} = \frac{822.96}{1000} \text{ m} = \frac{1000 \text{ gm}}{1000 \text{ gm}} = \frac{1524}{1000 \text{ gm}} = \frac{1000 \text{ gm}}{1000 \text{ gm}} = \frac{1524}{1000 \text{ gm}} = \frac{15224}{1000 \text{ gm}} = \frac{15224}{1000 \text{ gm}} = \frac{15224}{1000 \text{ gm}} = \frac{15224 \text{ gm}}{1000 \text{ gm}} = \frac{1215 \text{ gm}}{1000 \text{ gm}} = \frac{1215 \text{ gm}}{1000 \text{ gm}} = \frac{1335 \text{ gm}}{1000 \text{ gm}} = \frac{1000 \text{ gm}}{1000 \text{ gm}} = 1000 $	10 feet to	Di go ta in			
centimeters $10 ft \cdot \frac{12}{1} it \cdot \frac{2.54}{1.9} cm \cdot \frac{17}{100} m = \frac{30}{100} m = \frac{3}{100} cm = \frac{3}{100} cm m m m m m m m m m m m m m m m m m m$	metersand	tt > in + cm + meter, 2046	aug.		
9 vards to meters and gds $\rightarrow$ ff $\rightarrow$ in $\rightarrow$ cm $\rightarrow$ m 1 1 1 fr 100 cm $-100$ r $1$ 9 vards $\frac{1}{9}$ ds $\rightarrow$ ff $\rightarrow$ in $\rightarrow$ cm $\rightarrow$ m $\frac{1}{100}$ dr $\frac{1}{100}$ dr $\frac{1}$	centimeters	10 ft 12 in 2.54 Chr. 11 - 30 1.0 m = 13.	078m		
9 yards to meters and centimeters $\frac{9}{4}\frac{1}{3}\frac{5}{1}\frac{1}\frac$		1 1 ft 1 ip 100 cm = 100 m			
Interised and the second seco	9 yards to	yds -> f+->in->cm->m	Grand		
So feet to meters $ \frac{10}{100} = 1 \text{ y/s} = 1 \text{ ff} = 1 \text{ in} = 100 \text{ grad} = 100 \text{ grad}$	centimeters	que 3 Pt , 12 11 2.54 CM M	- 822,96		
So feet to meters $ \begin{array}{ccccccccccccccccccccccccccccccccccc$		The I dek I pk I in IDD ch	- <i>1</i> 00		
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$\frac{SO}{I} + \frac{1}{I} \frac{M}{I} +$	meters	$\frac{1}{2} \frac{1}{2} \frac{1}$	0. 221014		
24 ft/sec to miles/minute 24 ft/sec to miles/minute 24 ft/sec to miles/minute 24 ft/sec to miles/sec to ft -7 miles/sec -7 min 24 ft/sec to $\frac{24 ft}{15 cc}$ , $\frac{1}{10}$ mile, $\frac{60 \text{ Sec}}{1 \text{ min}} = \frac{1440}{5260}$ miles $\frac{24 ft}{15 cc}$ , $\frac{1}{5260}$ mile, $\frac{60 \text{ Sec}}{1 \text{ min}} = \frac{1440}{5260}$ miles $\frac{716}{100}$ , $\frac{700}{100}$ ft/sec $\frac{716}{100}$ , $\frac{700}{100}$ ft/sec $\frac{716}{100}$ , $\frac{716}{100}$		50 + 7 $12 m$ $2.590m$ $1 m$ $= 1027$	F 2Um T		
$\begin{array}{rcl} & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & $	2/1 ft/sosto	TA IN 100 Gr IW IN	, dy M		
$\frac{24PF}{15cc} \cdot \frac{1}{25c0} \frac{1}{10c} \frac{1}{10c} \cdot \frac{60}{52c0} \frac{52c0}{10c} \frac{1}{10c} $	miles/minute	Ff-7 miles sec 7 min			
34 miles to inches $m/z_3 \rightarrow f + \rightarrow inches$ 34miles = 12 in + 2154240 in 34miles - 200 ft - 12 in = 2154240 in 34miles - 200 ft - 12 in = 2154240 in 34miles - 200 ft - 12 in = 2154240 in 74miles - 200 ft - 12 in = 2154240 in 74miles - 200 ft - 12 in = 2154240 in 27 yd - 3 ft - 1 miles - 81 = 1.35 ft/sec How many hours are in a day? 24 hrs How many seconds are in a day? 1440 miles - 60 mile = 1440 mile How many seconds are in a day? 1440 miles - 60 sec = 86,400 sec/dig		24 FX 1 mily 60 Sec _ 1990 mily ~ -	17 milal		
34 miles to inches $ \begin{array}{c}                                     $		1 SCE 5280 PF 1 Min - 5280 Min ~00	Kih		
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$\frac{24 \text{ hrs}}{\text{How many minutes are in a day?}}$ $\frac{24 \text{ hs}}{24 \text{ hs}} = 60 \text{ min} = 1440 \text{ min}$ $\frac{1440 \text{ min}}{100000000000000000000000000000000000$	How many hours are in a day?				
How many minutes are in a day? 24h8 + 60  min = 1440  min How many seconds are in a day? $1440 \text{ min}/deg = \frac{60 \text{ sec}}{1 \text{ min}} = 86,400 \text{ sec}/deg$	24 hrs				
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24hs 60 min = 1440 min. How many seconds are in a day? 1440 min/day 60 sec = 86,400 sec/day	How many minutes are in a day?				
How many seconds are in a day? 1440 m/h/day = 60 sec = 86,400 sec/day	24hs , $60  min - 1440  min$				
How many seconds are in a day? 1440 m/h/day 60 sec = 86,400 sec/day					
1440 min/day - 60 sec = 86,400 sec/day	How many seconds are in a day?				
Inday I min = 00,100 day	1440 mil 60 Sec - 86 400 Sec/				
	day 1 mm - day				
How many hours are in a year?					
24 hrs. 365 day = 8760 huis					
dy yr					

## Convert 7920 yards to miles. 6.

Miles are bigger than yards; there are 1760 yards in every mile. Since I'm converting from a smaller unit (yards) to a bigger unit (miles), my answer needs to be a smaller number. So I divide:

$$\frac{Plan}{yds} \rightarrow feet \rightarrow miles$$

$$7920 yds \cdot \frac{3}{1} \frac{ff}{yds} \cdot \frac{1}{5280} \frac{miles}{ff} = \frac{23760}{5280} miles = 4.5 miles$$

In groups of THREE, figure out a way to solve questions 7 and 8. Be ready to present to the class!

7. Which is faster, going 80 miles an hour or going 40 meters per second? 60 seconds : 1 minute 60 minutes : 1 hour X I will convert 80 Mbr → meters 60 minutes : 1 hour Sec. 80 millis , 5280 pt 12 1 2.54 cm . 1 m hr . 1 milio 1 pt 1 th . 100 cm 1 mile : 5280 feet 1 foot : 12 inches  $\frac{80 \text{ miles}}{\text{hur}} \approx \frac{12874752 \text{ meter}}{100 \text{ hr}} \frac{1 \text{ min}}{60 \text{ min}} \frac{1 \text{ min}}{60 \text{ sec}}$   $\frac{12874752 \text{ meter}}{100 \text{ hr}} \frac{1 \text{ min}}{60 \text{ sec}}$   $\frac{12874752 \text{ meter}}{360000 \text{ sec}} \frac{35.76 \text{ mg}}{35.76 \text{ mg}}$ 2.54 centimeters : 1 inch

8. Suppose an object is moving at 66 ft/sec. How fast would you have to drive a car to keep pace with this object?

* cars = miles hr 7	66 f.K mile. sec 5280 f.K	1 mph 1 hr
Pla ft->miles =	$=\frac{237600}{5280}=$	45 miles hr