Curriculum Outcome

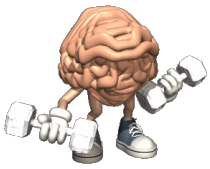
M3: Solve problems using SI and imperial units that involve linear measurement using estimation and measurement strategies

Student Friendly: The relationship between measurement units such as

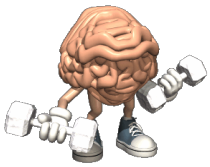
1 ft = 12 in

1 yd = 3 ft

1 mi = 1760 ft



Warm Up



Convert each of the following:

a) 112 in = 9 ft 4 in

-108

b) 18 ft = 216 in $18\text{ft} \times \frac{12\text{ in}}{1\text{ft}}$

c) 32 in = 2.8 ft $32\text{in} \times \frac{1\text{ ft}}{12\text{ in}}$

1ft = 12in
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Convert each of the following:

a) 112 in = _____ ft _____ in

b) 18 ft = _____ in

c) 3.2 mi = _____ inches

Let's try some more!

11 inch 1 ft

Convert each of the following

a) 78 in = 6 ft 6 in

b) 15 ft = 180 in

15 ft x 12 in / 1 ft

c) ~~2.5 mi = _____ in~~

d) 250" = 20 ft 10 in

500 yds x 3 ft / 1 yd

e) 500 yds = 1500 ft

f) 7' 2" = 2 yd 1 ft 2 in

g) ~~1 000 000 in = _____ mi~~

16' 5" = 5 yd 1 ft 5 in

5 yd, 1 ft, 5 in

16 ft x 1 yd / 3 ft = 16/3 yd = 5 1/3 yd

Convert to Inches.

1) 6 feet $8\frac{1}{2}$ inches — $80\frac{1}{2}$ in

2) 5 feet $2\frac{1}{2}$ inches — $62\frac{1}{2}$ in

3) 3 feet $11\frac{3}{8}$ inches — $47\frac{3}{8}$"

4) 2 feet $11\frac{7}{8}$ inches — _____

5) 6 feet $4\frac{7}{8}$ inches — _____

$6\text{ ft} \times \frac{12\text{ in}}{1\text{ ft}} = 72\text{ in}$

Convert to Feet and Inches.

1) 5ft $9\frac{1}{2}$ in — $69\frac{1}{2}$ inch

2) 7ft $1\frac{3}{8}$" — $85\frac{3}{8}$ inch

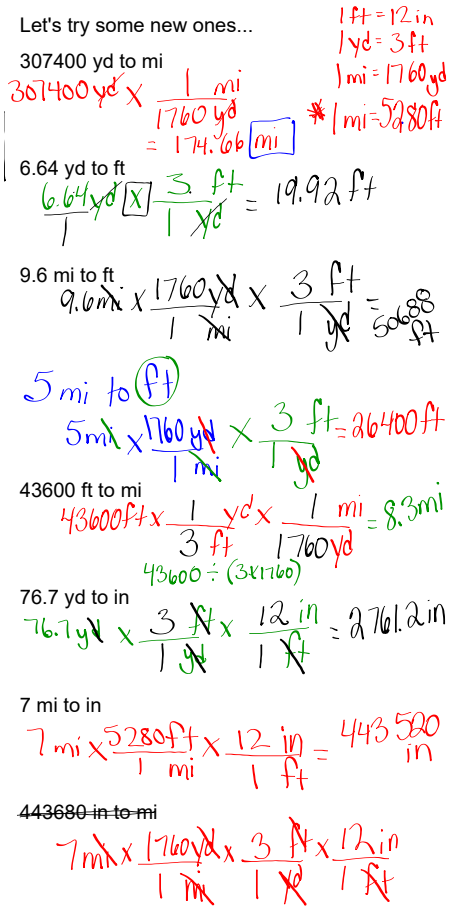
3) 6ft $2\frac{7}{8}$ in — $74\frac{7}{8}$ inch

4) _____ — $62\frac{3}{8}$ inch

5) _____ — $69\frac{3}{4}$ inch

$69'' - 60'' (5\text{ ft}) = 9''$

$74\frac{7}{8}\text{ in} - 72 (6\text{ ft}) = 2\frac{7}{8}\text{ in}$



Class/ Homework

Finish yesterday's sheet

6-10 on top and bottom section

1, 2, 3, 5, 6, 8, 9 on the back

~~1, 2, 4, 6, 7, 9, 11, 13, 14, 16 on general conversion sheet~~

Class/ Homework

Worksheet: Converting Imperial Lengths

(all questions)

And a

Feet to Inches worksheet

Inchto feet

1ft = 12in
1yd = 3ft
1mi = 1760yd

GMF 10 - Imperial Unit Conversion Name:_____

INSTRUCTIONS: Solve the unit conversion problem by cross cancelling units.

9 miles as inches	=	
17 miles as feet	=	

1ft = 12in
1yd = 3ft
1mi = 1760yd

54184 feet as miles	=	
7 miles as inches	=	
2 miles as inches	=	

1ft = 12in
1yd = 3ft
1mi = 1760yd

824435 inches as miles	=	
443680 inches as miles	=	
717897 inches as miles	=	

Warm up

7176400 ft = _____ mi

$7176400\ ft \times \frac{1\ mi}{5280\ ft} = 1359.16\ mi$

20.81 in = 1 ft 8.81 in

$\frac{20.81\ in}{1} \times \frac{1\ ft}{12\ in} = 8.81\ in$

94 ft = 31 yd 1 ft

$\frac{94\ ft}{1} \times \frac{1\ yd}{3\ ft} = 31\ yd$ 1 ft

TRY THIS ONE...

12. Pierre-Marc converted 21 ft. 9 in. into yards, feet, and inches. His answer was 7 yd. 1 ft. 6 in. Is his answer correct? If your answer is no, show the correct conversion.

21 ft 9 in

$21\ ft \times \frac{1\ yd}{3\ ft} = 7\ yd$

1ft = 12in
1yd = 3ft
1mi = 1760yd

7 yd 0 ft 9 in

7yd 9in

1.1 Imperial Measures of Length

Example 2 Solving a Problem Involving Converting between Units

Anne is framing a picture.
The perimeter of the framed picture will be 136 in.

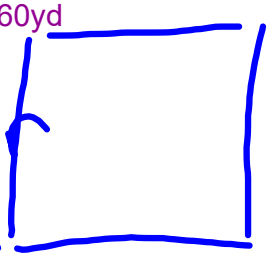
a) What will be the perimeter of the framed picture in feet and inches?

b) The framing material is sold by the foot. It costs $1.89/ft. What will be the cost of material before taxes?

1ft = 12in
1yd = 3ft
1mi = 1760yd

$136\text{in} \times \frac{1\text{ ft}}{12\text{ in}} = \frac{136}{12}\text{ ft}$

11 ft 4 in



* Perimeter - distance around the figure

$\frac{136}{12} = 11\frac{4}{12}\text{ ft}$

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CHECK YOUR UNDERSTANDING

1.1 Imperial Measures of Length

Example 2 Solving a Problem Involving Converting between Units

Anne is framing a picture.
The perimeter of the framed picture will be 136 in.

b) The framing material is sold by the foot. It costs $1.89/ft.
What will be the cost of material before taxes?

11 ft 4 in
12 ft x $1.89/ft
= $22.68

CHECK YOUR UNDERSTANDING

1.1 Imperial Measures of Length

2. Ben buys baseboard for a bedroom. The perimeter of the bedroom, excluding closets and doorway, is 37 ft.

a) What length of baseboard is needed, in yards and feet?

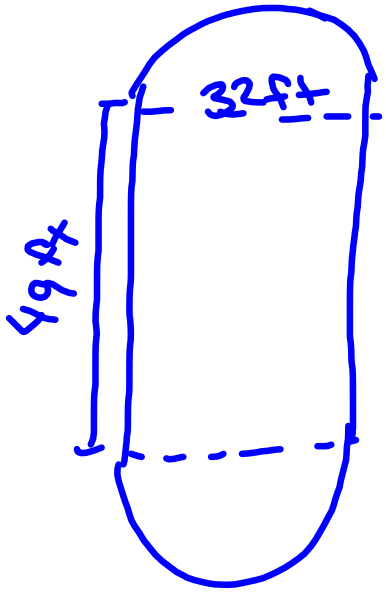
b) The baseboard material is sold by the yard. It costs $5.99/yd. What is the cost of material before taxes?

37 ft × 1 yd / 3 ft = 37/3 yd
12 1/3 yd

1ft = 12in
1yd = 3ft
1mi = 1760yd

12 yd 1 ft

13 yd × $5.99/yd
= $77.87



$C = 2\pi r$

$C = \pi d$

Class/ Homework

Textbook Handout

p. 150: #1 to 6 and 8

1ft = 12in
1yd = 3ft
1mi = 1760yd

Attachments

Worksheet - Converting Measurements.docx

Worksheet - Converting Imperial Lengths.docx

Worksheet2_ Inches to feet.pdf