


8/25

Welcome!

#1.5a

DO NOW:

- **Turn in** any late homework to the bin on Ms. Walczak's desk.
- **Grab YOUR calculator** and **YOUR Chromebook** (or do your Weekly Summary on your phone).
- Take out your **Warm Up Sheet** and start your Friday Free Write.

 Weekly Summary Tweet Question: What is one piece of advice to help someone solve equations better?

Homework: #1a Reflection 1.1-1.3 in Google Classroom due 9/1

Essential Question: How do you solve equations?

Math Fail?



1.5 Ratios, Rates, and Conversions

Ratio: Comparison of 2 numbers

$$2:9 \quad \frac{2}{9} \quad 2 \text{ to } 9$$

Unit Rate: Ratio with one # being 1
 \$3 for 1 gallon
 25 miles per 1 hour

Useful Conversions:

12 in = 1 ft
 3 ft = 1 yd
 5280 ft = 1 mi
 1 m = 3.28 ft
 16 oz = 1 lb
 1000 g = 1 kg
 100 cm = 1 m
 10 mm = 1 cm
 60 min = 1 hr
 60 sec = 1 min
 24 hours = 1 day

Example 1:

Deven is shopping for t-shirts. Which store offers the best deal?

Store A: \$25 for 2 shirts

$$25 \div 2 = 12.50 \text{ / shirt}$$

Store B: \$45 for 4 shirts

$$45 \div 4 = 11.25 \text{ / shirt}$$

Store C: \$30 for 3 shirts

$$30 \div 3 = 10 \text{ / shirt}$$

Conversion Factor: Ratio with equivalence between different units

$$\frac{12 \text{ in}}{1 \text{ ft}} \quad \frac{60 \text{ min}}{1 \text{ hour}}$$

Example 2: Use the Useful Conversions to convert the given amount to the given units:

a) 330 min to hours

$$330 \text{ min} \left(\frac{1 \text{ hr}}{60 \text{ min}} \right) = 5.5 \text{ hours}$$

b) 15 kg to g

c) 5 ft 3 in to in

d) 63 yd to ft

e) 168 hr to days

f) 1815 ft to m

Useful Conversions:

$$12 \text{ in} = 1 \text{ ft}$$

$$3 \text{ ft} = 1 \text{ yd}$$

$$5280 \text{ ft} = 1 \text{ mi}$$

$$1 \text{ m} = 3.28 \text{ ft}$$

$$16 \text{ oz} = 1 \text{ lb}$$

$$1000 \text{ g} = 1 \text{ kg}$$

$$100 \text{ cm} = 1 \text{ m}$$

$$10 \text{ mm} = 1 \text{ cm}$$

$$60 \text{ min} = 1 \text{ hr}$$

$$60 \text{ sec} = 1 \text{ min}$$

$$24 \text{ hours} = 1 \text{ day}$$

Example 3:

Ben ran the 50-yd dash in 5.8 sec. At what speed did Ben run in miles per hour? Round your answer to the nearest tenth.