

Directions: Answer the following. You must prove units and have an answer.

Conversions you may need:

1 ton/ 2000 pounds	60 sec/ 1min	60 min/1 hr	1 section/ 640 acres
1 bu wheat/ 60 lbs	1 bu barley/ 48 lbs	1 m/ 3.28 ft	365 days/ 1 year
52 weeks/ 1 year	128 ounces/ 1 gal	16 cups/ 1 gal	8 pints/ 1 gal
4 quarts/ 1 gal	1 fluid ounce/ 29.5735 milliliters		1 kilogram (kg) / 2.2 lbs

1. You are going to fertilize a pasture. You put down 200 lbs per acre. You have 4000 acres. How many tons of fertilizer do you need?
2. You fertilized 1000 acres. You used 50 tons of fertilizer. How many lbs/acre did you put down?
3. You fertilized 500 acres. You used 20 tons of fertilizer. How many lbs/acre did you put down?
4. You have 15 tons of fertilizer. How many sections can this fertilize at 15 pounds per acre?
5. You are converting from meters to feet because you are reading an Australian study. The study states that you mix 85 milliliters of chemical per gallon of water. How many ounces per gallon do you mix?
6. You are converting from meters to feet because you are reading an Australian study. The study states that you inject 75 milliliters per 650 kg of animal. How many ounces do you inject per pound of animal?
7. Someone is spraying a field that is 2000 meters wide. How many passes do they have to make with their 100 ft wide sprayer?

8. A combine harvest 300 pounds of barley per minute. How many bushels of barley does it harvest in 48 hours?

9. A combine can harvest 350 pounds of wheat per minute. It harvests 7800 bushels. How long did it take the combine to harvest this many bushels in hours?

10. A combine can harvest 550 pounds of wheat per minute. It harvests 8800 bushels. How long did it take the combine to harvest this many bushels in hours?

11. The dude for the Big Lebowski can harvest 20 acres/hour. You paid him 60 dollars for 8 hours of work. How many dollars did he get per acre?

12. Booker T can harvest 50 acres/hour. You paid him 500 dollars for 8 hours of work. How many dollars did he get per acre?

1. $\frac{4,000 \text{ acres}}{1} \times \frac{200 \text{ lbs}}{1 \text{ acre}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = \frac{\text{tons}}{1}$

400 tons

1

2. $\frac{50 \text{ tons}}{1} \times \frac{2000 \text{ lbs}}{1 \text{ ton}} \times \frac{1}{1000 \text{ acre}} = \frac{100 \text{ lbs}}{\text{acre}}$

100 lbs

1 acre

3. $\frac{1}{500 \text{ acres}} \times \frac{20 \text{ tons}}{1} \times \frac{2000 \text{ lbs}}{1 \text{ ton}} = \frac{80 \text{ lbs}}{\text{acre}}$

80 lbs

1 acre

$$4. \frac{15 \text{ tons}}{1} \times \frac{2000 \text{ lbs}}{1 \text{ ton}} \times \frac{1 \text{ acre}}{15 \text{ lbs}} \times \frac{1 \text{ section}}{640 \text{ acres}} = \frac{\text{Sections}}{1}$$

$$\frac{3.125 \text{ sections}}{1}$$

$$5. \frac{85 \text{ mL}}{1 \text{ gal}} \times \frac{1 \text{ oz}}{29.5735 \text{ mL}} = \frac{\text{ounces}}{\text{gal}}$$

$$\frac{85 \text{ mL}}{1 \text{ gal}} \times \frac{1 \text{ oz}}{29.5735 \text{ mL}} = \frac{2.87 \text{ oz}}{1 \text{ gal}}$$

$$6. \frac{75 \text{ mL}}{650 \text{ Kg}} \times \frac{1 \text{ Kg}}{2.2 \text{ lbs}} \times \frac{1 \text{ oz}}{29.5735 \text{ mL}} = \frac{\text{oz}}{16}$$

$$\frac{.0018 \text{ oz}}{1 \text{ pound}}$$

$$7. \frac{2000 \text{ m}}{1} \times \frac{3.28 \text{ ft}}{1 \text{ m}} \times \frac{1 \text{ pass}}{100 \text{ ft}} = \frac{\text{pass}}{1}$$

65.6 passes
or 66

$$8. 48 \text{ hrs} \quad ~~\frac{48 \text{ hrs}}{1}~~ \quad \frac{300 \text{ lbs}}{1 \text{ minute}} \times \frac{1 \text{ bu}}{48 \text{ lbs}} = \frac{\text{bu}}{1}$$

$$\frac{48 \text{ hrs}}{1} \times \frac{60 \text{ min}}{1 \text{ hr}} \times \frac{300 \text{ lbs}}{1 \text{ min}} \times \frac{1 \text{ bu}}{48 \text{ lbs}} = \frac{\text{bu}}{1}$$

18,000 bu

1

$$9. \frac{7800 \text{ bu}}{1} \times \frac{60 \text{ lbs}}{1 \text{ bu}} \times \frac{1 \text{ min}}{350 \text{ lbs}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{\text{hours}}{1}$$

223 hours

$$10. \frac{8800 \text{ bu}}{1} \times \frac{60 \text{ lbs}}{1 \text{ bu}} \times \frac{1 \text{ min}}{350 \text{ lbs}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{\text{hrs}}{1}$$

16 hours

$$11. \frac{1 \text{ hr}}{20 \text{ acre}} \times \frac{\$60}{8 \text{ hr}} = \frac{\$}{\text{acre}}$$

$\frac{\$.375}{1 \text{ acre}}$

$$12. \frac{1 \text{ hr}}{50 \text{ acre}} \times \frac{\$500}{8 \text{ hr}} = \frac{\$}{\text{acre}}$$

$\frac{\$ 1.25}{\text{acre}}$