

Math 20 - Tuesday, 3/14

Pi Day!
 $\pi = 3.14159\dots$

Return quizzes

Please turn in Assignment 4

Please turn in all recovery work

Questions

New material : 6.2, 6.3, 9.7

Quiz 8 on Thursday (7.2, 5.1, 5.2, 5.3)
5.4

Final Review handed out

Bonus Problems handed out - Due at the Final

Class Party !! on Thursday, 3/16

Bring a snack to share if you wish :)

Questions

S.1 network #4

new
equipment $\frac{6}{7} = \frac{99,600}{x}$
maintenance
old

$$\frac{6x}{6} = \frac{7(99,600)}{6}$$
$$= \$116,200$$

The amount spent on maintaining old equipment would be \$116,200.

$$\frac{7}{6} = \frac{x}{99,600}$$

$$7 \div 6 * 99,600$$

$$\frac{7}{x} = \frac{6}{99,600}$$

2.5 grams to milligrams

2,500

2,500 mg

$$\frac{1360 \text{ stamps}}{85 \text{ pr year}} = 16 \text{ years}^c$$

S.1 #8 network

$$\frac{85 \text{ stamps}}{1 \text{ year}}$$

$$\frac{85 \text{ stamps}}{1 \text{ year}} \cdot 7 \text{ years}$$
$$= 595 \text{ stamps}$$

$$\frac{\text{miles}}{\text{hour}} = \frac{28.8 \text{ miles}}{18 \text{ hrs}}$$

$$= 1.6 \text{ mph}$$

$$\frac{\text{hours}}{\text{mile}} = \frac{18 \text{ hrs}}{28.8 \text{ miles}} = .625 \text{ hours}$$

Percentage

Decimal to a Mixed Number

Percent

Decimal

Mixed #

140%

1.40

$1 \frac{40}{100}$

$1 \frac{2}{5}$ or $\frac{7}{5}$

$1 \frac{2}{5}$



Section 6.2 - Solving Percent Problems

Test 1

$$\begin{array}{r} 33 \\ \hline 40 \\ = .825 \\ = 82.5\% \\ \approx 83\% \end{array}$$

Test 2

$$\begin{array}{r} 54 \\ \hline 60 \\ = .90 \\ = 90\% \end{array}$$

Calculate
a %

$$\text{Percentage} = \frac{\text{part}}{\text{whole}}$$

Examples:

① 33 is what percent of 40?

$$\frac{33}{40} = .825 = 82.5\%$$

② what is 80% of 40?

$$\frac{\text{Part}}{\text{whole}} = \frac{\%}{100}$$

~~$$\frac{x}{40} = \frac{80}{100}$$~~

$$\frac{100x}{100} = \frac{40(80)}{100}$$

$$x = 32$$

32 is 80% of 40.

part whole
③ what is 80% of 110?

$$\frac{\text{part}}{\text{whole}} = \frac{\%}{100}$$

$$\frac{\text{is}}{\text{of}} = \frac{\%}{100}$$

$$\frac{\text{part}}{\text{whole}} = \frac{\%}{100}$$

$$\frac{\cancel{x}}{\cancel{110}} = \frac{\cancel{80}}{\cancel{100}}$$

$$\frac{100x}{100} = \frac{80(110)}{100}$$

$$x = 88$$

$$\text{check } \frac{88}{110} = \frac{80}{100}$$

④ 72 is 40% of what?

$$\frac{\text{is}}{\text{of}} = \frac{\%}{100}$$

$$\frac{\cancel{72}}{\cancel{x}} = \frac{\cancel{40}}{\cancel{100}}$$

$$\frac{40x}{40} = \frac{72(100)}{40}$$

$$x = 180$$

$$\begin{aligned} .001 &= .1\% \\ .01 &= 1\% \end{aligned}$$

⑤ 0.1% of 680 is _____.

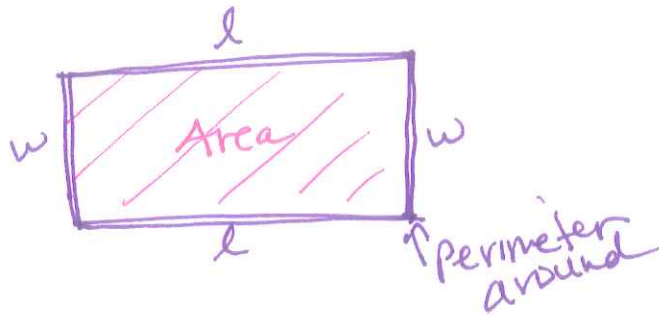
$$\frac{x}{680} = \frac{.1}{100}$$

$$\frac{100x}{100} = \frac{.1(680)}{100}$$

$$x = .68$$

Section 9.7 - Area and Perimeter

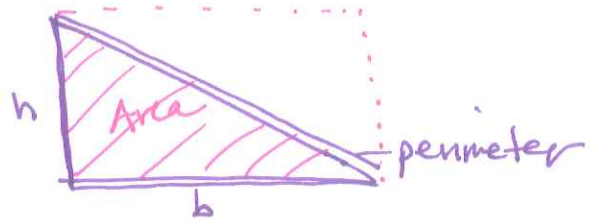
Rectangles



units² Area: Rectangle $A = l \cdot w$

units Perimeter = Add up all sides
rectangle = $2l + 2w$

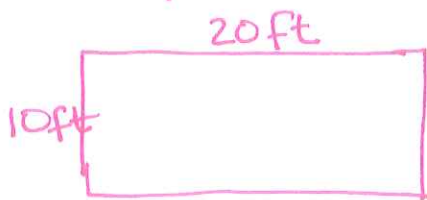
Triangles



Triangle $A = \frac{1}{2} b \cdot h$

or $\frac{b \cdot h}{2}$

Examples

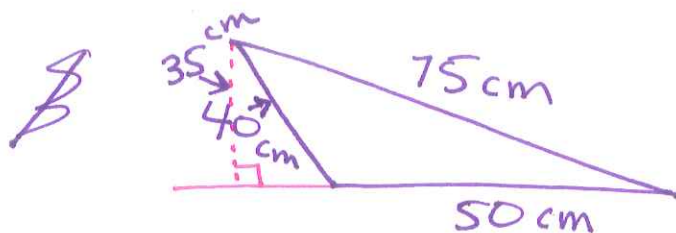


Area: $10(20) = 200 \text{ ft}^2$

Perimeter: $10 + 20 + 10 + 20 = 60 \text{ ft}$

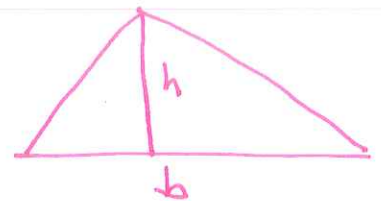
$10 \text{ ft} \cdot 20 \text{ ft}$

$10 \cdot 20 \text{ ft} \cdot \text{ft}$
 200 ft^2



Perimeter: $40 + 50 + 75 = 165 \text{ cm}$

Area: $\frac{b \cdot h}{2} = \frac{50 \cdot 35}{2} = 875 \text{ cm}^2$



Know the formulas!