

NAME

Key

7ACL FINAL EXAM REVIEW PART 2 (#1)

1. Solve and check: $\frac{9}{5}(x+10) = 4x+7$

CR: $\frac{9}{5}(x+10) = 4x+7$

$x = \frac{20}{5} = 4$

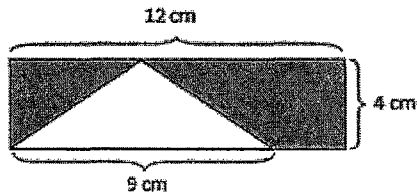
$$\begin{array}{r} 9x + 18 = 4x + 7 \\ -9x \quad -9x \\ \hline 18 = 11x + 7 \\ -7 \quad -7 \\ \hline 11 = 11x \end{array}$$

$$\begin{array}{r} \frac{9}{5}(5+10) = 4(5)+7 \\ \frac{9}{5}(15) = 20+7 \\ 27 = 27 \checkmark \end{array}$$

$(\frac{5}{11}) \cdot 11 = 11 \cdot (\frac{1}{11})$
 $5 = 1$

2. Calculate the area of the shaded region.

Rect $A = lw$
 $A = 12(4)$
 $A = 48$
 Tri $A = \frac{1}{2}bh$
 $A = \frac{1}{2}(9)(4)$
 $A = 18$
 $SR = 48 - 18$
 $SR = 30 \text{ cm}^2$



3. List the total possible outcomes of a spinning a spinner with the letters A, B, and C and rolling a number cube.

$3 \cdot 6 = 18 \text{ outcomes}$



4. Verizon is offering a deal. There is an initial start up fee of \$24.00 and each month costs \$15.00. If you pay \$84.00, write and solve an equation to determine how many months of Verizon coverage you received.

$$\begin{array}{r} 24 + 15x = 84 \\ -24 \quad -24 \\ \hline 15x = 60 \end{array}$$

$$\frac{15x}{15} = \frac{60}{15}$$

$x = 4 \text{ months of coverage}$

5. A survey was conducted and 7 out of 8 prefer Magic Kingdom over Epcot.

a) What is the experimental probability that the next person surveyed will prefer the Magic Kingdom?

$$\frac{7}{8} = \frac{x}{80}$$

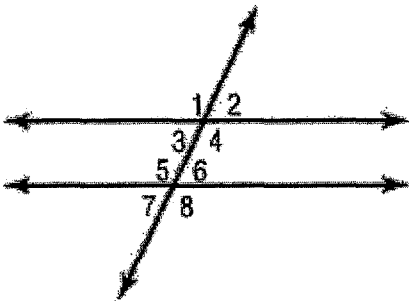
$$\frac{8x}{8} = \frac{560}{8}$$

$$x = 70$$

b) If 80 people were surveyed, how many people should you expect to prefer the Magic Kingdom?

70 people

6. Find the value of x and the missing angles if $\angle 4$ is $5x + 55$ and $\angle 8$ is $2x + 100$.



$$5x + 55 = 2x + 100$$

$$\begin{array}{r} -2x \quad -2x \\ \hline 3x + 55 = 100 \\ -55 \quad -55 \\ \hline 3x = 45 \\ \underline{3} \quad \underline{3} \\ x = 15 \end{array}$$

$$\angle 4 = 5x + 55$$

$$\angle 4 = 5(15) + 55$$

$$\angle 4 = 75 + 55$$

$$\boxed{\angle 4 = 130^\circ}$$

$$\angle 8 = 2x + 100$$

$$\angle 8 = 2(15) + 100$$

$$\angle 8 = 30 + 100$$

$$\boxed{\angle 8 = 130^\circ}$$

7. Find the total cost of a \$ 25 movie. You have a 10% coupon and have to pay 5% sales tax.

discount - $25(0.10) = 2.50$
 sale price - $25 - 2.50 = 22.50$
 tax - $22.50(0.05) = 1.13$
 total cost - $22.50 + 1.13$
 total - \$ 23.63

8. Using the equation below, identify the slope and y intercept and then graph.

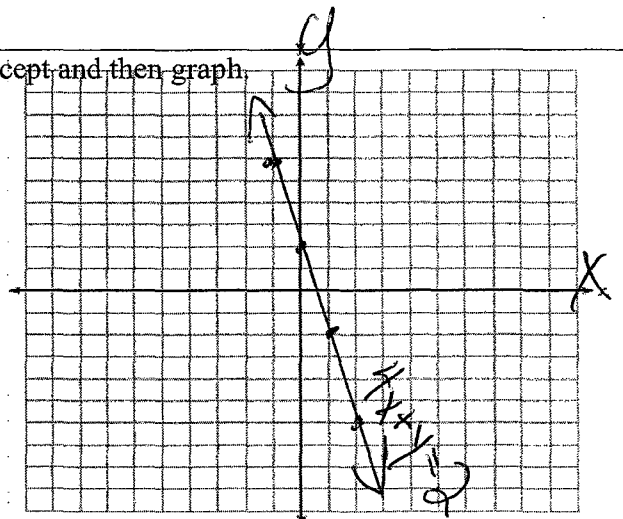
$$4x + y = 2$$

Slope: $-\frac{4}{1} \frac{y}{x}$

Y Intercept: $2 (0, 2)$

$$4x + y = 2$$

$$\begin{array}{r} -4x \quad -4x \\ \hline y = -4x + 2 \end{array}$$



9. A rectangle has a length of $(3x + 3)$ and a width of $(5x + 1)$.

a) Express the perimeter in simplest form. $16x + 8$

$$2(3x + 3) + 2(5x + 1)$$

$$6x + 6 + 10x + 2$$

$$16x + 8$$

b) Factor your answer. $8(2x + 1)$

10. Solve and graph: $-2(10 + x) < -14$

$$\begin{array}{r} -20 + -2x < -14 \\ +20 \qquad +20 \\ \hline \end{array}$$

$$-2x < 6$$

$$\frac{-2x}{-2} < \frac{6}{-2}$$

$$x > -3$$

Reverse
Symbol
divide by negative

