

NAME Key

7AC FINAL EXAM REVIEW PART 2 (ws#3)

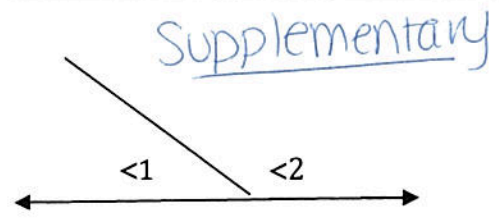
1) List the total possible outcomes of rolling a die and flipping a coin.

a) How many outcomes are there? $6 \cdot 2$
12

b) P(even number, heads) $\frac{3}{6} \cdot \frac{1}{2} = \frac{3}{12}$
 $\frac{3}{12}$ or $\frac{1}{4}$

2) Using the diagram below, find the following:

If $\angle 1$ is $2x - 3$ and $\angle 2$ is $3x - 2$



a) $x =$ 37

b) $\angle 1 =$ 71° $2(37) - 3$

c) $\angle 2 =$ 109° $3(37) - 2$

$$\begin{aligned} (2x - 3) + (3x - 2) &= 180 \\ 5x - 5 &= 180 \\ \frac{5x - 5}{+5} &= \frac{180}{+5} \\ \frac{5x}{5} &= \frac{185}{5} \\ x &= 37 \end{aligned}$$

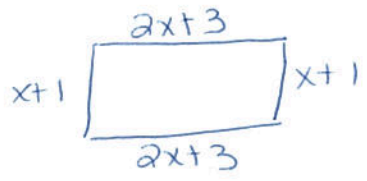
3) An online retailer charges \$6.99 plus \$0.55 per pound to ship electronics purchases. Write and solve an equation to determine how pounds the DVD player weighs if your bill was \$9.74.

$$\begin{aligned} 6.99 + 0.55x &= 9.74 \\ -6.99 & \quad -6.99 \\ \hline 0.55x &= 2.75 \\ \frac{0.55x}{0.55} &= \frac{2.75}{0.55} \end{aligned}$$

$x = 5$ pounds

4) A rectangle has a length of $(2x + 3)$ and a width of $(x + 1)$.

a) Express the perimeter in simplest form. $6x + 8$



b) Factor your answer. $2(3x + 4)$

$$\frac{6x + 8}{2} = \frac{6x}{2} + \frac{8}{2}$$

*add sides
 $2x + 3 + x + 1 + 2x + 3 + x + 1$
 $6x + 8$

- 5) The tables below shows the number of hours students of two classes studied for their math final.

2 nd Period Class					
7	5	12	19	4	10

- a) Find the median for each set of data.

2nd
4, 5, 7, 10, 12, 19 med = 8.5

6th
4, 9, 11, 12, 12 med = 11

6 th Period Class				
12	11	4	9	12

- b) Write a sentence comparing the amounts of hours each class studied.

The 6th period class spent more time studying.

- 6) A survey was conducted and 4 out of 5 prefer a Colgate toothpaste

- a) What is the experimental probability that the next person surveyed will prefer Colgate toothpaste?

$$\frac{4}{5}$$

- b) If 80 people were surveyed, how many people should you expect to prefer Colgate toothpaste?

$$\frac{4}{5} = \frac{x}{80}$$

$$\frac{5x}{5} = \frac{320}{5}$$

$$x = 64 \text{ people}$$

- 7) You bought 3 shirts at \$12.00 each. You had a 20% coupon and the sales tax was 8%. Calculate the total cost.

$$3(12) = 36$$

$$\begin{array}{r} \text{coupon} \\ \hline 100 - 20 = 80 \end{array}$$

$$80\% (36) =$$

$$28.80$$

tax

$$100 + 8 = 108$$

$$108\% (28.80) =$$

$$31.104$$

$$\$31.10$$

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- 8) Sue plays soccer. The team needs to score at least 7 goals to win the game. The team already has 2 goals. Write, solve and graph the inequality representing how many goals Sue needs to score in order for the team to win.

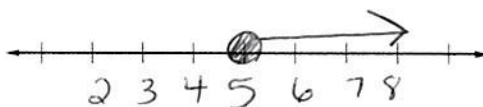
a) Write an inequality: _____

$$x + 2 \geq 7$$

b) Solve the inequality:

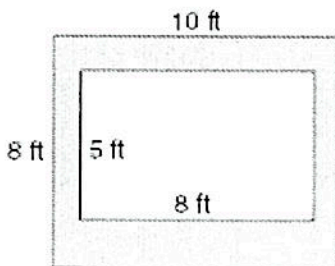
$$\begin{array}{r} x + 2 \geq 7 \\ -2 \quad -2 \\ \hline x \geq 5 \end{array}$$

c) Graph the solution on the number line:



- 9) Calculate the area of the shaded region.

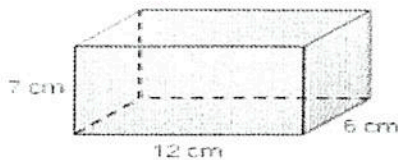
Rect. 1	Rect 2
$A = lw$	$A = lw$
$A = 10(8)$	$A = 5(8)$
$A = 80$	$A = 40$



$$80 - 40 =$$
$$40 \text{ ft}^2$$

- 10) Chris is making a mini bird house. Calculate the amount of wood he will need to construct the bird house.

Surface area



$$\begin{aligned} T/B &: 12(6)(2) = 144 \\ L/R &: 7(6)(2) = 84 \\ F/B &: 12(7)(2) = +168 \end{aligned}$$

$$396 \text{ cm}^2$$