

NAME Key

7AC FINAL EXAM REVIEW PART 2 (ws#1)

- 1) Mike needs at least \$500 to buy his new iPad. He already has \$250. Write, solve and graph the inequality representing the above situation.

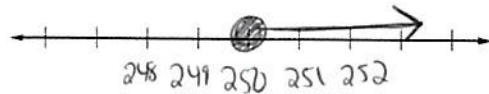
a) Write an inequality:

$$x + 250 \geq 500$$

b) Solve the inequality:

$$\begin{array}{r|l} -250 & -250 \\ \hline x & \geq 250 \end{array}$$

c) Graph the solution on the number line:



- 2) The following table shows the amount of potatoes grown using two different fertilizers.

a) Find the median for each set of data.

A: 16, 17, 18, 19, 19, 20, 21, 22, 23, 27

$$\text{med} = 19.5$$

B: 18, 19, 20, 21, 21, 24, 25, 27, 28, 29

$$\text{med} = 22.5$$

Yield of potatoes with fertiliser A (kg)	Yield of potatoes with fertiliser B (kg)
27	28
20	19
16	18
18	21
22	24
19	20
23	25
21	27
17	28
19	21

b) Write a sentence comparing the yield of potatoes using each fertilizer.

Fertilizer B yields more potatoes

- 3) It costs \$12 to attend a golf clinic with a local pro. Buckets of balls for practice during the clinic cost \$3 each. If you pay \$30, write and solve an equation to determine how many buckets you can purchase.

$$\begin{array}{r} 12 + 3x = 30 \\ -12 \quad -12 \\ \hline \end{array}$$

$$\frac{3x}{3} = \frac{18}{3}$$

$$x = 6 \text{ buckets}$$

$$5(7.50) = \$37.50$$

- 4) Mary is purchasing 5 books at \$7.50 each. Find her final cost after a 20% discount and an 8% sales tax.

Discount:
 $100 - 20 = 80$
 $80\% (37.50) =$
 $\$30$

Tax
 $100 + 8 = 108\%$
 $108\% (30) =$
 $\$32.40$

- 5) A survey was conducted and 12 out of 25 prefer a comedy.

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

$$\frac{12}{25}$$

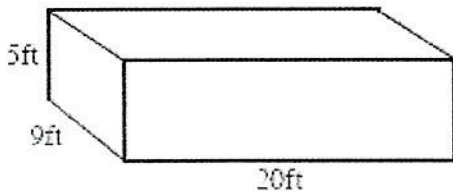
- b) If 200 people were surveyed, how many people should you expect to prefer a comedy?

~~$$\frac{12}{25} = \frac{x}{200}$$~~

$$\frac{25x}{25} = \frac{2400}{25}$$

$$x = 96 \text{ prefer a comedy}$$

- 6) Marsha has a 20ft x 9ft x 5ft rectangular prism toy box. Marsha wants to paint this toy box and needs to know how much paint she will need. What is the surface area of the rectangular prism?



TOP/BOTTOM:	$20(9)(2) = 360$
Left/Right:	$5(9)(2) = 90$
Front/Back:	$20(5)(2) = 200$

$$+ 200$$

$$650 \text{ ft}^2$$

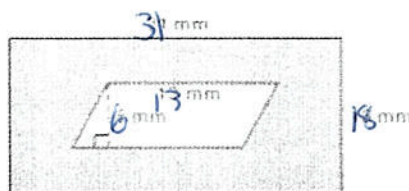
- 7) Calculate the area of the shaded region.

Rect:

$$A = lw$$

$$A = 31(18)$$

$$A = 558$$



Par.

$$A = bh$$

$$A = 6(13)$$

$$A = 78$$

$$558 - 78 = 480 \text{ mm}^2$$

NAME _____

7AC FINAL EXAM REVIEW PART 2 (ws#1) page 2

3) Using the diagram below, find the following:

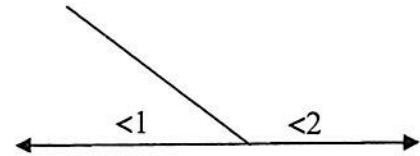
If $\angle 1$ is $4x - 7$ and $\angle 2$ is $15x - 3$

Supplementary

$$(4x - 7) + (15x - 3) = 180$$

$$\begin{array}{r} 19x - 10 = 180 \\ + 10 \quad + 10 \\ \hline 19x = 190 \end{array}$$

$$\frac{19x}{19} = \frac{190}{19} \quad x = 10$$

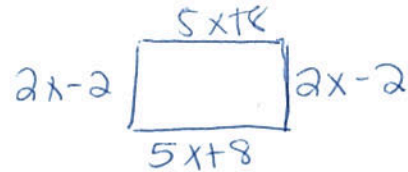


a) $x =$ 10

b) $\angle 1 =$ 33° $4(10) - 7 = 33$

c) $\angle 2 =$ 147° $15(10) - 3 = 147$

9) A rectangle has a length of $(5x + 8)$ and a width of $(2x - 2)$.



a) Express the perimeter in simplest form. $14x + 12$

b) Factor your answer. $2(7x + 6)$

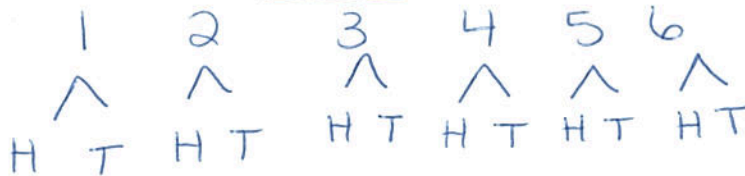
add all sides

$$(2x - 2) + (5x + 8) + (2x - 2) + (5x + 8) = 14x + 12$$

$$\frac{14x + 12}{2} = \frac{14x}{2} + \frac{12}{2}$$

10) John is rolling a die and tossing a coin.

a) Draw a tree diagram to find the number of outcomes.



b) How many possible outcomes are there? $6(2) =$ 12

c) $P(\text{even \#, heads})$

$$\frac{3}{6} \cdot \frac{1}{2} = \frac{3}{12} \text{ or } \frac{1}{4}$$