Q1 If a crazy monkey does 10 coin tosses. And if he gets a head, he picks a fruit from a basket containing 10 apples and 10 oranges. If he gets a tail then he does nothing.

(a) What is the minimum number of apples he will pick.

(b) What is the maximum number of oranges he will pick?

(c) What is the "expected" number of apples he will pick.

(d) ~~If~~ If of the first ~~two~~ Three pickings he makes a fruit train, how many different types of fruit trains can he make?

Q2. Make a box and whisker plot of the following

(a) numbers

12, 21, 3, 15, 18, 9, 7, 4, 0

(b) ~~Find the~~ Page 466, do Problems # 1, 2, 3.

Q3 Give one example each of

(a) Independent events

(b) Dependent events.

(c) Overlapping events.

Q4 Is the following a true statement?

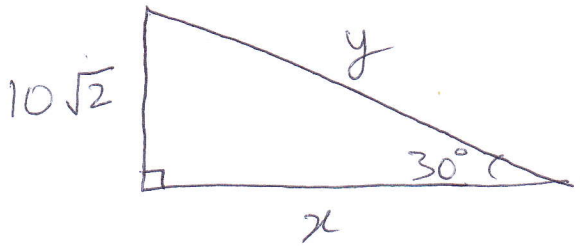
$$P(A \text{ or } B) + P(A \text{ and } B) = P(A) + P(B)$$

Q4 Simplify the following expressions.

(a) $5x(2-x) - x(-x+2) - (3x^2+x-3)$

(b) $\frac{100\sqrt{125}}{\sqrt{5}} - \sqrt{\frac{1000}{5}} + \frac{10^{-1/2}}{10^{-3/2}} - (10^3)^2$

Q5.



Find x and y.

Q6 ~~Is~~ Are the following numbers rational or irrational?

(a) π^2

(b) $0.1110\,1110\,1110\,1110$

(c) $0.111011101110\ldots$

(d) $0.\overline{1110}$

(e) 0.110111011110

(f) $0.1101110\,111\,10\,111110\ldots$

(g) -8.013

(h) $\sqrt{2}$

Q7 Convert the following into scientific form

(a) $\frac{10}{200}$

(b) $5\frac{1}{4}$

(c) 0.001301

(d) $50,002$

Q8 Are the following true or false?

(a) $|x| \leq |x|^2$ for all x.

(b) $x \leq \frac{|x|}{2}$ for all x

(c) $|x| - x = 0$ for all x

(d) $|x| - 2x < 0$ for all x

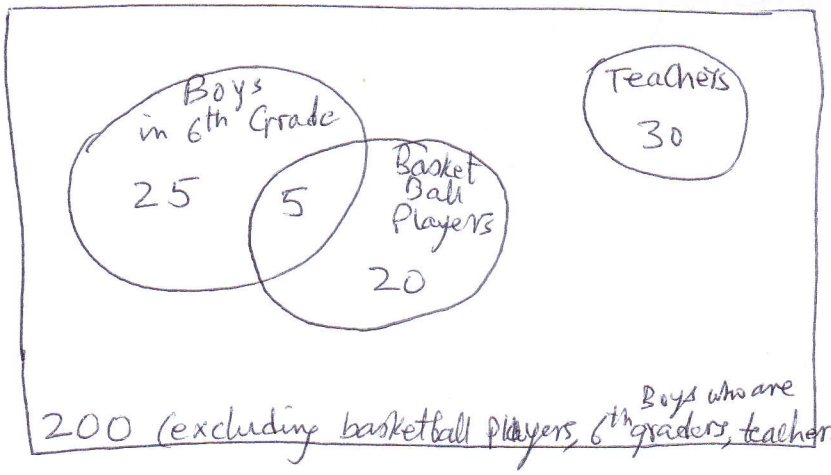
(e) $(|x|)^3 > 0$ for all x

(f) $x^3 \geq 0$ for all x.

(g) $x^2 \geq 0$ for all x

(h) $x^3 < x^2$ for all x.

Q9



If you pick a random person from the above school, find

(a) Probability that they are a teacher or a basketball player.

(b) They are a basketball player given that they are not a teacher

(c) They are a basketball player given that ~~they~~ he is ~~are~~ a 6th grade boy.

Q10 Convert the following percentage into a fraction

(a) $\frac{3}{4}\%$

(b) 29.5%

(c) 0.01%

Q11 Convert the following into a fraction

$-8.013\overline{75}$