

Warm Up

Ch. Review Day

Rational
Function from Advanced
Algebra

①

$$y = \frac{1}{x+2} + 3$$



- what is the equation of the vertical asymptote?
- what is the equation of the horizontal asymptote?
- what is the y-intercept?
- what are (is) the x-intercept(s)?

sketch the graph below, label it, be sure to draw any asymptotes with a dotted line. Always draw asymptotes first before drawing the function itself.

FINDING PROBABILITIES

② Ralph estimates that he has a 60% chance of getting an A on his English test, and a 45% chance of getting an A on his physics test. What is the probability that he gets an A on both tests, assuming that the events are independent?

3

Suppose a machine consists of two components, component A and component B, and the machine can function properly only if its components are functioning properly. On any given day, component A has a 5% probability of failure and component B has a 10% probability of failure. Assume that the component failures are independent events.

- a. Find the probability that component A will *not* fail on a given day. _____
- b. Find the probability that component B will *not* fail on a given day. _____
- c. On any given day, find the probability that the machine will work correctly all day. _____

3

4

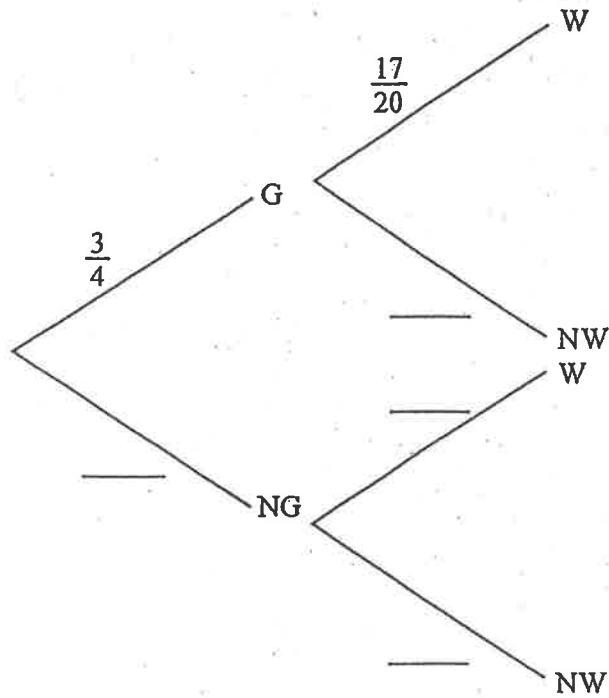
A game requires you to toss three dice each turn.

- a. What is the probability that you will roll three sixes during a turn?
- b. What is the probability that you will roll three of a kind during a turn?
- c. If you play the game for five turns, what is the probability that you will *not* get three of a kind during any turn?

5

Today Philip intends to go walking. The probability of good weather (G) is $\frac{3}{4}$. If the weather is good, the probability he will go walking (W) is $\frac{17}{20}$. If the weather forecast is not good (NG) the probability he will go walking is $\frac{1}{5}$.

(a) Complete the probability tree diagram to illustrate this information.



(b) What is the probability that Philip will go walking?

(c) what is the probability that there is good weather given that he went walking?