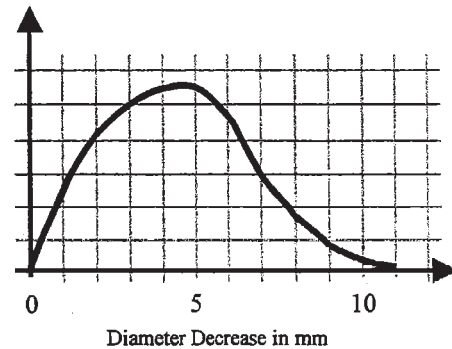


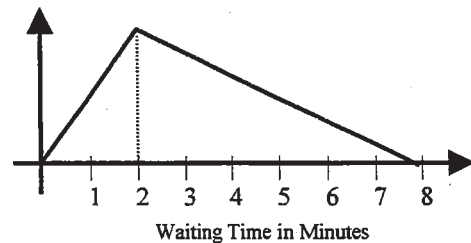
Problems For You To Do: (Section 6.1)

- When you arrive at a bus stop the time that you have to wait until the next bus comes is a uniformly distributed random variable, with values between 0 and 10 minutes. When you arrive at a bus stop what is the probability that:
 - you have to wait between 1 and 3 minutes?
 - you have to wait at least 3 minutes?
 - the next bus arrives within 45 seconds?

- The decrease in diameter of a certain type of metal pipe when it is machined is a random variable whose probability density function is approximated by the curve shown. Find the approximate percentage of metal pipes that have a diameter decrease between 5 and 7 mm.

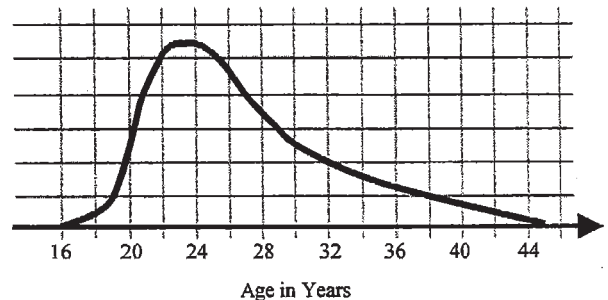


- Suppose the waiting time on a telephone help line is a random variable with a probability distribution as shown. What is the probability that the waiting time exceeds 2 minutes?

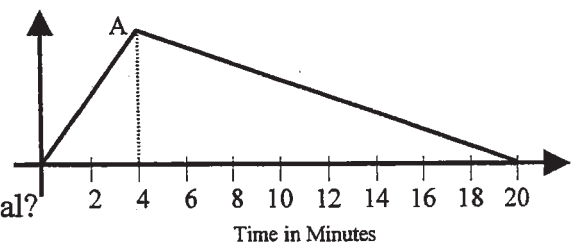


- Suppose that the age of a woman at the birth of her first child is approximated by the idealized histogram to the right.

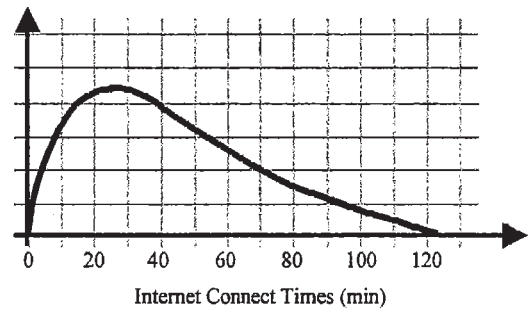
Approximately what percentage of first time mothers are between 24 and 30 years old? (Indicate the method of approximation.)



- The probability distribution to the right approximates the time that it takes for the Canucks to get their first shot on goal.
 - What is the vertical height of Point A?
 - What is the chance that it takes the Canucks at least 4 minutes to get their first shot on goal?

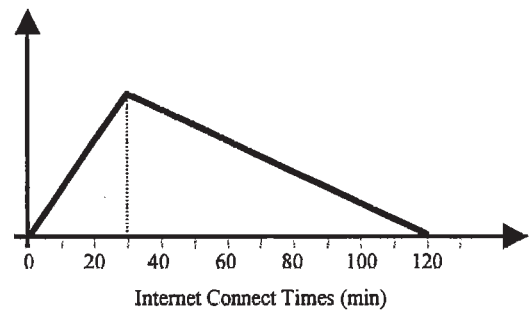


6. Suppose that the probability distribution of daily Internet connect times is given by the idealized histogram to the right. Use the grid to obtain an estimate of
- the *percentage* of Internet connect times that are at least 60 minutes
 - the *median* of the Internet connect times



7. The probability distribution of daily Internet connect times is given by the idealized histogram to the right.

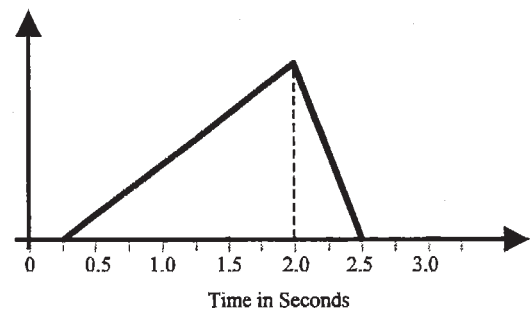
What is the *exact* probability that an Internet connect time is at most 30 minutes?



8. The probability distribution for motorists' reaction time after a traffic light turns green is given by the density function shown.

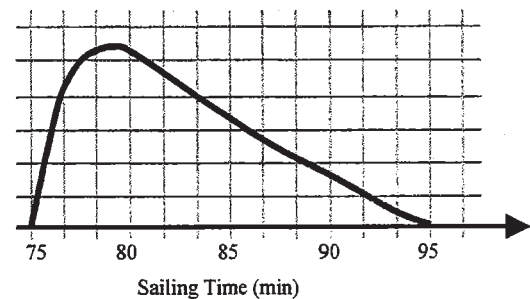
What is the probability that a motorist's reaction time is

- greater than 2 seconds?
- less than one second?



9. Suppose the Horseshoe Bay-Nanaimo sailing time for the Pacific Cat ferry has a probability distribution approximated by the idealized histogram to the right.

Approximately what *percentage* of the sailing times are at most 80 minutes?
(Indicate the method of your approximation.)



10. The probability distribution to the right approximates the time that it takes the Grizzlies to get their first shot at the basket.

What is the chance that it takes the Grizzlies between 20 and 60 seconds to get their first shot at the basket?

