

TAKS Objective 9
TEK 8.11A
Tutorial
(Grades 9, 10, and 11)

...find the probabilities of dependent and independent events.

What is the formula for probability?

$$\frac{\text{\# of favorable outcomes}}{\text{total \# of outcomes}}$$

A container has 3 blue socks, 5 yellow socks, 2 black socks, and 10 white socks.

What is the probability of randomly drawing out a black sock?

$3/20$

A container has 3 blue socks, 5 yellow socks, 2 black socks, and 10 white socks.

What is the probability of randomly drawing out a black or yellow sock?

$7/20$

A container has 3 blue socks, 5 yellow socks, 2 black socks, and 10 white socks.

What is the probability of randomly drawing out 1 black sock, replacing it, and then drawing out 1 yellow sock?

$$\frac{2}{20} \cdot \frac{5}{20}$$

$$1/40$$

A container has 3 blue socks, 5 yellow socks, 2 black socks, and 10 white socks.

What is the probability of randomly drawing out a black sock, not replacing it, and then drawing out a yellow sock?

$$\frac{2}{20} \cdot \frac{5}{19}$$

$$1/38$$

A container has 3 blue socks, 5 yellow socks, 2 black socks, and 10 white socks.

What is the probability of randomly drawing out 2 white socks?

$$\frac{10}{20} \cdot \frac{9}{19}$$

$$9/38$$