

MATHCOUNTS[®] Problem of the Week Archive

Online App Store – September 15, 2014

Problems

A particular online app store, has three categories of apps available to download: \$3 apps, \$1 apps and free apps. There are no additional taxes or fees to download an app from this website. If Peyton wants to download equal numbers of apps in these three categories, what is the greatest number of apps she can be downloaded for \$20?

Peyton first began downloading apps from this online app store in January. At that time, she decided against purchasing an annual subscription for \$15.99. This subscription would have allowed Peyton to download an unlimited number of apps, in all three categories, for 12 months from the date the subscription was purchased. Since January, Peyton has downloaded six \$3 apps, five \$1 apps and four free apps from this online app store. If Peyton had purchased the annual subscription in January, how much could she have saved on these 15 downloads?

If Peyton still has not purchased the subscription, and she wants to spend exactly \$10 to download seven apps, what is the greatest number of free apps she can download?