Proportional Reasoning

Worked Examples

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If I have a quarter tank, I can drive about a quarter of my full range.

So I can drive about 75 more miles.

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150-ounce bottle on sale for $17.99. Which is the best deal?

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By the way, you could just as easily answer this question using ounces per dollar – the bottle with the most ounces for each dollar would be the best deal. Would you get the same answer?

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Suppose you have a coupon for $4 off any size bottle of your detergent. If you use your coupon, which bottle will have the smallest price per ounce?

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Little bottle: $3.99/50 ounces is about $0.08 per ounce.

Medium bottle: $9.99/100 ounces is about $0.10 per ounce

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The coupon makes the little bottle the best deal per ounce on this trip.

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About how many of my songs can I fit on my iPod?

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Unfortunately, my iPod has a usable capacity of only 27.8 GB.

About how many of my songs can I fit on my iPod?

The iPod can hold about $\dfrac{27.8}{32.42} \approx 0.8575$ of my library.

Of my 9000 songs, then, it can hold about 0.8575 · 9000 = 7700 songs.

Check: The iPod said it would hold about 7500 songs, so that seems right.

I need a bigger iPod.

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Will she look the right size next to one of these model cars?

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Will she look the right size next to one of these model cars?

If each inch of the doll's height corresponds to 43 inches on a real person, she will represent a person who is 1.5 times 43 inches, or 64.5 inches tall.

She'd appear to be about 5 foot 5 inches, which seems reasonable for a real person.