

At the shirt sale, Jackson sees two shirts that he likes equally well. Which is the better bargain, and why?



$$100 - 40 = 60\%$$

$$33(0.6) = 19.8 \text{ } \leftarrow \text{Final price}$$

$$100 - 25 = 75\%$$

$$27(0.75) = 20.25$$

✓ is the best one.

2nd method: $33(0.4) = 13.2 \text{ \$}$ ← discount

$$33 - 13.2 = 19.8 \text{ \$}$$

is the final price.



Ruth is weighing two offers the sales departments of two competing companies. One offers a base salary of \$25,000 plus 5% of gross sale; the other offers a base salary of \$20,000 plus 7% of gross sale. What would Ruth's gross sale total need to be to make the second job offer more attractive than the first?

Job offers

① 25000 5%
g.s

② 20000 7%
more

$$\text{1st: } 25000 + 0.05s$$

$$\text{2nd: } 20000 + 0.07s$$

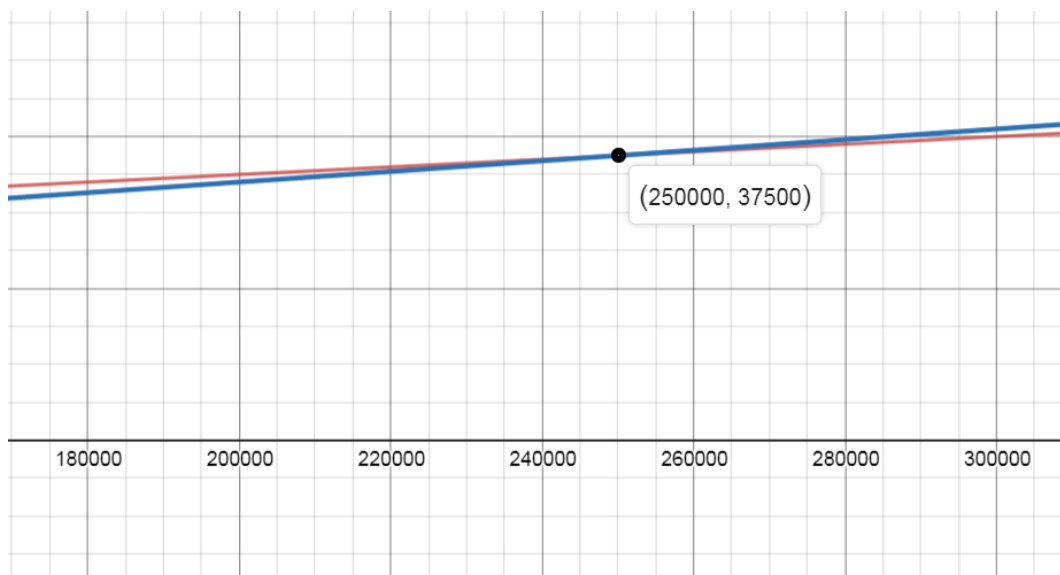
$$20000 + 0.07s > 25000 + 0.05s$$

$$0.02s > 5000$$

$$s > 250,000$$

S: total sale for which ② > ①

For the 2nd job to be more attractive, Ruth has to make more than 250,000 sales.
↓
worth of



Travel Time

On their 560-mile trip the Bruins basketball team spent two more hours on the interstate highway than they did on local highways. They averaged 45 mph on local highways and 55 mph on the interstate highways. How many hours did they spend driving on local highways?

$d = v \cdot t$
 we cannot add speeds.

560 mi
 ↙ ↘
 Local Interstate
 45 mph 55 mph
 time $t?$ $t+2$

$$d_{\text{total}} = d_L + d_I$$

$$560 = 45t + 55(t+2)$$

$$560 = 45t + 55t + 110$$

$$450 = 100t \rightarrow t = 4.5 \text{ h}$$