

1.

$$\begin{aligned} \text{Area of 1st bed} &= l \times w \\ &= 7 \times 5 = 35\text{ft}^2 \\ \text{Area of 2nd bed} &= l \times w \\ &= 7 \times 2 = 14\text{ft}^2 \\ \text{Total area} &= 35 + 14 \\ &= 49\text{ft}^2 \\ \text{Cost total of mattress} &= \$6 \times 49\text{ft}^2 \\ &= \$294 \end{aligned}$$



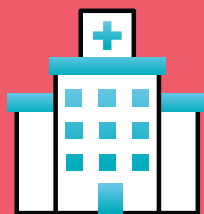
2.

$$\begin{aligned} \text{(a) Cost of shirts in clearance sale} &= \$150 \text{ for } 2 \\ \text{For 1 shirt} &= \$150/2 = \$75 \\ \text{Price less in 1 shirt} &= \$100 - \$75 \\ &= \$25 \\ \text{Cost of shirts in another store with 30\%off} &= 100 \times 30/100 \\ &= \$30 \text{ off} \\ &= \$100 - \$30 \\ &= \$70. \\ \text{Thomas should visit store with 30\% off as in this store cost of 1 shirt is} &= \$70. \\ \text{(b) Thomas spent in clearance sale} &= 4 \times \$75 \\ &= \$300. \end{aligned}$$



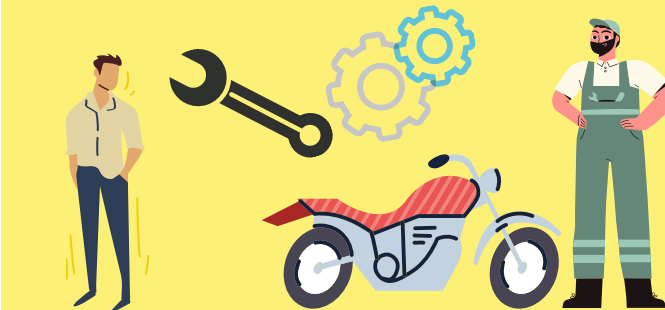
3.

$$\begin{aligned} \text{(a) Time in route 1} &= \text{distance/speed} \\ &= 60/30 \\ &= 2 \text{ hours.} \\ \text{Time in route 2} &= \text{distance/speed} = 80/50 = 1.6 \\ &= 1.6 \text{ hours.} \\ \text{Route 2 will take less time.} \\ \text{(b) Time difference in both routes} &= 2\text{hrs.} - 1.6 \text{ hrs.} \\ &= 0.4 \text{ hrs.} \end{aligned}$$



4.

$$\begin{aligned} \text{(a) Mechanic A charges for 3 hours} &= \$60 \times 3 \\ &= \$180 \\ \text{Mechanic B charges for 2 hours} &= \$100 \times 2 \\ &= \$200 \\ \text{Mechanic A is cheaper.} \\ \text{(b) Time saved} &= \text{Time of mechanic A } 3 \text{ hrs.} - \text{Time of mechanic B } 2 \\ &= 1 \text{ hours.} \\ \text{Extra amount} &= \text{Charges of mechanic B} - \text{Charges of mechanic A} \\ &= \$200 - \$180 = \$20. \end{aligned}$$



5.

$$\begin{aligned} \text{(a) Noah's riding time} &= 3\text{hrs.} \\ \text{Nora's riding time} &= 2\text{hrs.} \\ \text{(b) Noah's distance} &= \text{speed} \times \text{time} \\ &= 10 \times 3 \\ &= 30\text{km} \\ \text{Nora's distance} &= \text{speed} \times \text{time} \\ &= 13 \times 2 \\ &= 26\text{km} \\ \text{Noah rides bicycle more.} \end{aligned}$$

