7) (6A, Practice 4A, p 53)

(#6) \[ \frac{36}{400} = 0.09 \cdot \frac{36}{400} \% = 9\% \]

(alt \[ \frac{36}{400} = \frac{9}{100} = 9\% \])

WHOLE UNIT: 400 seats

(#7) \[ \frac{2}{5} = 100 \cdot \frac{2}{5} \% = 40\% \] WHOLE UNIT: number of students

(alt \[ \frac{2}{5} = \frac{4}{10} = \frac{40}{100} = 40\% \])

(#8) \[ 3 \text{ m} = 300 \text{ cm} \quad \frac{75}{300} = 0.25 \cdot \frac{75}{300} \% = 25\% \] WHOLE UNIT: 300 cm of cloth

(alt \[ \frac{75}{300} = \frac{25}{100} = 25\% \])

Can also do:

\[ \frac{1}{100} (300 \rightarrow 100\%) \]

\[ \times 25 (75 \rightarrow 25\%) \]
(#9) \[22 + 14 = 36, \quad 45 - 36 = 9\] gold medals
\[
\frac{9}{45} = \frac{1}{5} = \frac{20}{100} = 20\%
\]
WHOLE UNIT: 45 medals

\[
\text{can also do:} \quad 45 \rightarrow 100\% \quad \frac{\cancel{45}}{5} \div \frac{\cancel{9}}{1} \rightarrow \boxed{20\%}
\]

(#10) spent \[30\%\] of her savings on a watch

60\% of the remainder on a dress; that is,

60\% of \[70\%\] of her savings which is \[\boxed{42\%}\] of her savings

Since these are percentages of the same quantity, we can add -

she spent \[72\%\] of her savings leaving \[\boxed{28\%}\] of her savings

WHOLE UNIT: Kristin's savings

8) (6A, Practice 4C, p 60)

(#1) \[1.5 \text{ l} = 1500 \text{ ml} \quad \frac{480}{1500} = 1\% \cdot \frac{480}{150} = \boxed{32\%}
\]

(#2) \[2 \text{ hrs} = 120 \text{ mins} \quad \frac{30}{120} = \frac{1}{4} = \boxed{25\%}
\]

(#3) \[\frac{36}{24} = \frac{3}{2} = 100 \cdot \frac{3}{2} \% = \boxed{150\%}
\]

(b) A is \[50\%\] longer than B

(#4) \[2.5 \text{ kg} = 2500 \text{ g} \quad \frac{650}{2500} = 1\% \cdot \frac{650}{250} = \boxed{26\%}
\]

(#5) percent of decrease = \[
\frac{50}{200} \cdot 100\% = \frac{1}{4} = \boxed{25\%}
\]

WHOLE UNIT = \$200

original price

(#6) percent of increase = \[
\frac{16}{80} \cdot \frac{1}{5} = \boxed{20\%}
\]

WHOLE UNIT = 80 members

(number of members last year)

(#7) percent of increase = \[
\frac{3}{12} = \frac{1}{4} = \boxed{25\%}
\]

WHOLE UNIT = \$12

(orig. price per Kg)
(#8) \(\# 60 - \# 51 = \# 9 \) discount
\[
\frac{9}{60} = \frac{3}{20} = \frac{15}{100} = 15\% \text{ discount}
\]
WHOLE UNIT = \(\# 60\) (orig price)
\[
\frac{51}{60} = \frac{17}{20} = \frac{85}{100} = 85\%.
\]
He paid 85\% of orig price; so there was a 15\% discount.

(#9) 600 workers.
250 men \(\rightarrow\) 600 - 250 = 350 women

How many percent more women than men are there?  \text{ WHOLE UNIT: number of men}

There are 100 more women than men

100 is what percent of 250? \[
\frac{100}{250} = \frac{2}{5} = \frac{40}{100} = 40\%.
\]
alt/
\[
\text{alt/}
\]
\[
\text{alt/}
\]
\[
\text{alt/}
\]

(#10) WHOLE UNIT: Nancy's amount (\# 25)

25 \(\rightarrow\) 100\%  \[
\frac{25}{5} = \frac{5}{1} = 40\%.
\]
Mary saved 40\% more than Nancy.