Express each ratio as a fraction in simplest form.

1) 12 dolls out of 18 toys

2) 40 dogs to 12 cats

3) 3 inches to 1.5 feet

4) Which is less expensive per ounce, 16 ounces of Swiss cheese for $2.75 or 24 ounces of cheddar cheese for $3.25? Explain

Express as a unit rate. Round the nearest tenth.

5) 140 miles in 6 gallons

6) 5 1/2 feet in 3 minutes

7) 352 beats in 4 2/5 minutes

Simplify.

Complete the conversion. Round to the nearest tenth.

8) $\dfrac{18}{\dfrac{3}{4}}$

9) 1500 lb = _____ kg

10) Express 14 2/3% as a fraction.

11) A hippo can run 20 miles per hour. How fast is this in feet per second?

Express each ratio as a fraction in simplest form.

1) 12 dolls out of 18 toys

$$\frac{12}{18} = \frac{2}{3}$$

2) 40 dogs to 12 cats

$$\frac{40}{12} = \frac{10}{3}$$

3) 3 inches to 1.5 feet

$$\frac{3}{18} = \frac{1}{6}$$

$\longrightarrow 1.5 \times 12$ or $12 + 6$

4) Which is less expensive per ounce, 16 ounces of Swiss cheese for $2.75 or 24 ounces of cheddar cheese for $3.25? Explain

$$\frac{\$2.75}{16} \approx \$.17$$

$$\frac{\$3.25}{24} \approx \$.14$$

$$\$.17 > \$.14$$

cheddar is cheaper

Express as a unit rate. Round the nearest tenth.

5) 140 miles in 6 gallons

$$\frac{140}{6} = 23.3 \, mpg$$

6) 5 1/2 feet in 3 minutes

$$\frac{5\frac{1}{2}}{3}$$

$$\frac{11}{2} \cdot \frac{1}{3} = \frac{11}{6}$$

$$1\frac{5}{6} \, ft/min$$

7) 352 beats in 4 2/5 minutes

$$\frac{352}{4\frac{2}{5}}$$

$$\frac{352}{1} \cdot \frac{5}{22} = \frac{1760}{22} = 80 \, bpm$$

Simplify.

8) $\dfrac{\frac{18}{3}}{\frac{3}{4}}$

$\overset{6}{\cancel{18}} \cdot \frac{4}{3} = 24$

$\dfrac{\cancel{18}}{1} \cdot \dfrac{4}{\underset{1}{\cancel{3}}} = 24$

10) Express 14 2/3% as a fraction.

$\dfrac{14\frac{2}{3}}{100}$

$=$

$\dfrac{\overset{}{\cancel{44}}}{3} \cdot \dfrac{1}{\underset{25}{\cancel{100}}} \quad \dfrac{11}{75}$

Complete the conversion. Round to the nearest tenth.

9) 1500 lb = _____ kg

$\dfrac{1500\,\cancel{lb}}{1} \cdot \dfrac{1\,kg}{2.203\,\cancel{lb}}$

or

$\dfrac{1500\,\cancel{lb}}{1} \cdot \dfrac{.454\,kg}{1\,\cancel{lb}}$

$680.9\,kg$

or

$681\,kg$

11) A hippo can run 20 miles per hour. How fast is this in feet per second?

$$\frac{20 \text{ mi}}{1 \text{ hr}} \cdot \frac{1 \text{ hr}}{60 \text{ min}} \cdot \frac{1 \text{ min}}{60 \text{ sec}} \cdot \frac{5280 \text{ ft}}{1 \text{ mi}}$$

$$\frac{105600 \text{ ft}}{3600 \text{ sec}} \approx 29.3 \text{ ft}/\text{sec}$$