Solutions to WS 16.1 - Proportions, #2-32 even

Determine whether each proportion is true by cross-multiplication.

(2) $\frac{12}{9} \overset{?}{=} \frac{18}{12}$

$144 \neq 162$

Not a proportion

(4) $\frac{27}{21} \overset{?}{=} \frac{35}{28}$

$756 \neq 735$

Not a proportion

(6) $\frac{3}{5} \overset{?}{=} \frac{81}{135}$

$405 = 405$

Proportion

(8) $\frac{12}{20} \overset{?}{=} \frac{27}{45}$

$540 = 540$

Proportion

(10) $\frac{12}{8} \overset{?}{=} \frac{48}{34}$

$408 \neq 384$

Not a proportion

(12) $\frac{12}{16} \overset{?}{=} \frac{60}{80}$

$960 = 960$

Proportion

Solve each proportion. Round to the nearest hundredth if necessary.

(14) $\frac{38}{19} = \frac{n}{20}$

$\frac{19n}{19} = \frac{760}{19}$

$n = 40$

(16) $\frac{n}{48} = \frac{72}{96}$

$\frac{96n}{96} = \frac{3456}{96}$

$n = 36$

(18) $\frac{x}{37.2} = \frac{16}{24.8}$

$\frac{24.8x}{24.8} = \frac{595.2}{24.8}$

$x = 24$

(20) $\frac{t}{25} = \frac{471}{15}$

$\frac{15t}{15} = \frac{11775}{15}$

$t = 785$

(22) $\frac{72}{34} = \frac{9}{g}$

$\frac{72g}{72} = \frac{306}{72}$

$g = 4.25$

(24) $\frac{4}{m} = \frac{1.6}{22}$

$\frac{1.6m}{1.6} = \frac{88}{1.6}$

$m = 55$

(26) $\frac{21}{56} = \frac{x}{7.2}$

$\frac{56x}{56} = \frac{151.2}{56}$

$x = 2.7$

(28) $\frac{45}{18} = \frac{3}{K}$

$\frac{45K}{45} = \frac{54}{45}$

$K = 1.2$

(30) $\frac{60}{21} = \frac{20}{s}$

$\frac{60s}{60} = \frac{420}{60}$

$\boxed{s = 7}$

(32) $\frac{y}{16} = \frac{12}{4}$

$\frac{4y}{4} = \frac{192}{4}$

$\boxed{y = 48}$