

Cobb-Montford Mini-Mu 2015 Part 2

Solution Key

(26) 8 9 12 ¹⁴ 16 18 24 B

(27) $28 \times 6 = 168$ sec cobblestone $33 \times 4 = 132$ sec wood
 $168 + 132 = 300$ sec $60 \overline{) 300}^5$ 5 min. A

(28) $\frac{8 \text{ baby lambs}}{3 \text{ years}} \xrightarrow{\times 4} \frac{32 \text{ baby lambs}}{12 \text{ years}}$ B

(29) $\begin{array}{r} 7.4 \\ \times 4 \\ \hline 29.6 \end{array}$ 29.6
 $\frac{29.6}{1361.6} = 1 \text{ block}$ D

(30) $\begin{array}{r} \$7.50 \times 14 \text{ axes} = \$105. \\ \$14.50 \times 8 \text{ tables} = \$116. \\ \$18.20 \times 5 \text{ furnaces} = \$91. \\ \hline \$312 \end{array}$ D

(31) 1st wk = $\frac{1}{4}$ of 64 = 16 $64-16=48$
 2nd wk = $\frac{1}{4}$ of 48 = 12 $48-12=36$
 3rd wk = $\frac{1}{4}$ of 36 = 9 $36-9=27$
 4th wk = $\frac{1}{3}$ of 27 = 9 $27-9=18$
 5th wk = $\frac{1}{3}$ of 18 = 6 $18-6=12$
 6th wk 12 cows C

(32) $2 \text{ sticks} \times \$0.45 = \$0.90$
 $3 \text{ cobblestones} \times \$0.75 = \$2.25$
 $\$0.90 + \$2.25 = \$3.15 = 1 \text{ ax}$
 $\begin{array}{r} \$3.15 \\ \times 8 \\ \hline 25.20 \end{array}$ C

(33) $\frac{1 \text{ block}}{3 \text{ sec}} \xrightarrow{\times 165} \frac{165}{495 \text{ sec}}$

8 min = 480 sec
 $\frac{1}{4}$ min = 15 sec $\rightarrow 495 \text{ sec}$
 $\begin{array}{r} 165 \\ 3 \overline{) 495} \\ \underline{3} \\ 19 \\ \underline{18} \\ 13 \end{array}$ B

(34) $\frac{1 \text{ block} = 4 \text{ planks}}{1 \text{ door} \xrightarrow{160} 160 \text{ doors}} = \frac{640 \text{ doors}}{6 \text{ planks} \xrightarrow{160} 960 \text{ planks}}$
 $\frac{1 \text{ block}}{4 \text{ planks}} \xrightarrow{\times 240} \frac{240 \text{ blocks}}{960 \text{ planks}}$ B

2015 Solution Key

Part 2 Continued

(35) $\frac{2}{3}$ of $\frac{400}{1} = 800$ students played Minecraft

$\frac{2}{5}$ of $\frac{160}{1} = 320$ students played more than 3 days a week
A

(36) $6+7=13$ total axes $6+7+3+12=28$ total tools $\frac{13}{28}$

(37) $\frac{1}{2}$ ton = 1000 pounds

$$\begin{array}{r} 232. \\ 1.3 \overline{) 1000.0} \\ \underline{86} \\ 140 \\ \underline{129} \\ 110 \\ \underline{86} \\ 24 \end{array}$$

232 blocks B

(38) $\frac{8 \text{ sec}}{3 \text{ blocks}} = \frac{3600 \text{ sec}}{1350 \text{ blocks}}$
 $1 \text{ hr} = 60 \text{ min}$ $1 \text{ hr} = 3600 \text{ sec}$
 $1 \text{ min} = 60 \text{ sec}$

$$\begin{array}{r} 450 \\ 8 \overline{) 3600} \\ \underline{32} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

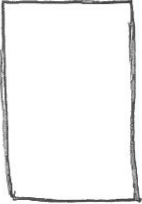
D

(39) $\frac{1 \text{ monster}}{30 \text{ sec}} = \frac{120 \text{ min}}{3600 \text{ sec}}$
 $1 \text{ hr} = 3600 \text{ sec}$
 $120 \text{ monsters in 1 hr}$

$$\begin{array}{r} 120 \\ 30 \overline{) 3600} \\ \underline{60} \\ 60 \\ \underline{60} \\ 0 \end{array}$$

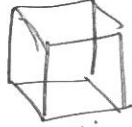
$$\begin{array}{r} 120 \\ \times 6.4 \\ \hline 480 \\ 720 \\ \hline 768.0 \end{array}$$

C

(40) 
 $\frac{311 \text{ ft}}{-28 \text{ ft}} = \frac{6.5}{13 \text{ ft}}$
 $2 \overline{) 13.0}$
 $\begin{array}{r} 6.5 \\ \underline{12} \\ 10 \\ \underline{10} \\ 0 \end{array}$ 6.5 ft A

(41) 5×5 blocks = 25 blocks for each wall + roof
 4 walls and 1 roof = 5 sides
 $25 \times 5 = 125$ blocks take out 1 block for the door
 124 blocks A

(42) $5, 9, 17, 33, 65, 129, 257$
 Monsters - 1st, 2nd, 3rd, 4th, 5th, 6th, 7th D

(43) 
 $28 \text{ in} = 2\frac{1}{3} \text{ ft}$
 $2\frac{1}{3} \text{ ft} = \frac{7}{3} \text{ ft}$
 $\frac{7}{3} \cdot \frac{7}{3} \cdot \frac{7}{3} = \frac{343}{27}$
 $27 \overline{) 343}$
 $\begin{array}{r} 12 \\ \underline{27} \\ 63 \\ \underline{63} \\ 0 \end{array}$ 12 $\frac{19}{27} \text{ ft}^3$ D

2015 Solution Key Part 2 Continued

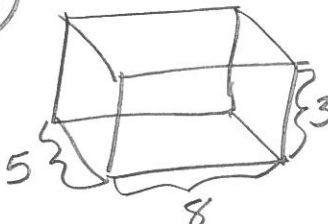
(44) 10:23 - 12:00 Noon 97 min
 12:00 - 3:18 198 min
295 min

9:19 - 12:00 Noon 161 min 295
 12:00 - 2:53 173 min 334
334 min 629 min
 C

(45) 4 steps $\xrightarrow{\times 64}$ 256 steps
 3 sec $\xrightarrow{\times 64}$ 192 sec
 3.2
 60 $\overline{)192.0}$
 180 $\downarrow$
 120
 120
120
 A

(46) $\frac{2}{3}$ of $\frac{72}{1}$ = 48 tomatoes + corn
 $\frac{1}{4}$ of $\frac{72}{1}$ = 18 peas
 66
 412
 - 66
66
 6 acres of watermelons
 A

(47) 30
 $\times 15$
150
 30
450
 \$ 4.50 savings B

(48)  8 x 5 x 3 = 120
 D

(49) 25 min
 $\times 20$ traps
00
 50
500 min
 49
 $\frac{500 \text{ min}}{45}$
 455 min
 60 $\overline{)455}$
 420
35
 7 hrs 35 min
 7:00 $\rightarrow$ 2:00 + 35 min
 7 hrs 2:35 A

(50) 4 walls and 1 roof = 5 sides
 200
 5 $\overline{)1000}$ 200 blocks on each side
10
 0
 0
 0
0

What number times itself will come close to 200 without going over?
 $15 \times 15 = 225$ too big
 $14 \times 14 = 196$ this is it
 because it is very close to 200
 C