|  |  |  |  |
| --- | --- | --- | --- |
| 19.  | a) $km tonnes amount$$$28 48 24000$$$$ 49 96 ? $$$$ =\frac{49}{28}×\frac{96}{48}×24000$$ =84,000b)$ 8 tonnes≡3000 $$$96 tonnes≡ \frac{96×3000}{8} $$$$=36,000 $$$$total profit=84000-36000$$$$=48000$$c)$km tonnes amount$$$28 48 24000 $$$$ 84 48 ? $$$$ \frac{48}{48}×\frac{84}{28}×24000 $$$$=72000$$$$144\% rep 72000 $$$$ 100\% rep ? $$$$ = \frac{100×72000}{144} $$$$=50,000 $$ | M1M1A1M1A1M1A1B1M1A1 |  |
|  |  | 10 |  |
| 20. | a)$y=2x+3$

|  |  |  |
| --- | --- | --- |
| X | 0 | 1 |
| y | 3 | 5 |

$$ y=\frac{-x}{2}+3$$

|  |  |  |
| --- | --- | --- |
| X | 0 | 2 |
| y | 3 | 2 |

b) (0,3)c) y=0 x=3d) 1130 ±1 | B1B1S1L1L1B1B1B1B1B1 | For table of valuesFor table of valuesScaleBoth lines correctly drawn |
|  |  | 10 |  |
| 22. | a)b) $$area A=\frac{1}{2}×200×160=1600$$$$ area B=\frac{160+80}{2}×80=9600$$$$Area C=\frac{1}{2}×120×80=4800$$$$area D=\frac{1}{2}×40××200=400$$$$area E=\frac{200+80}{2}×280=44000$$$$Area F=\frac{1}{2}×40×80=1600$$$$ sum=79200m^{2} $$$$ $$$$\rightarrow \frac{79200m^{2}}{10,000m^{2}}$$$$=7.92ha$$ | S1B1B1M1M1M1M1A1M1A1 | ScaleOffsetsBaseline |
|  |  | 10 |  |
| 23. | a)b)$$area of squares=8×8×5=320$$$$area of triangles=\frac{1}{2}×8×3×4=48$$$$ sum =368cm^{3} $$c) $$ \frac{1}{10,000}=\frac{368}{x} $$$$x=3680,000cm^{2}$$$$10000cm^{2}=1m^{2}$$$$3680000cm^{2}=\frac{3680000×1}{10000} $$$$ =368m^{2} $$ | B1B1M1M1A1M1M1A1 | Correct net |
|  |  | 10 |  |
| 24. | a)$$water:Alcohol $$$$1 :4$$$$mass of water=\frac{1g}{cm^{3}}×1$$$$=1g $$$$mass of alcohol=\frac{0.8g}{cm^{3}}×4$$$$=3.2g$$$$density of mixture=\frac{mass}{vol} $$$$ \frac{1+3.2}{1+4} =\frac{4}{5}$$ $ =\frac{0.84g}{cm^{3}} $$$ $$$$density of stone=\frac{8.6g}{cm^{3}}$$$$vol. of stone=\frac{129}{8.6}$$$$=15cm^{3}$$$$new reading=40+15$$$$=55cm^{3}$$c)$$\frac{1g}{cm^{3}}\rightarrow \frac{1000kg}{m^{3}}$$$$\frac{8.6g}{cm^{3}}\rightarrow \frac{\frac{8.6g}{cm^{3}}×\frac{1000kg}{m^{3}}}{\frac{1g}{cm^{3}}} $$$$=\frac{8600kg}{m^{3}}$$ | M1M1A1M1A1M1A1M1A1 |  |
|  |  | 10 |  |