5－n－15：能解決時間的乘除計算問題。

5－n－16：能認識重量單位「公噸」及「公噸」、「公斤」間的關係，並做相關計算。

5－n－17：能認識面積單位「公畝」、「公頃」、「平方公里」及其關係，並作相關計算。

5－n－19：能認識體積單位「立方公尺」，及「立方公分」、「立方公尺」間的關係，並作相關計算。

5－n－21：能理解容量、容積和體積間的關係。

5－n－15：能解決時間的乘除計算問題。

※ 大大國小籃球隊每天練球1小時20分鐘，20天共花多少時間練球？

20小時40分鐘

21小時20分鐘

21小時40分鐘

26小時40分鐘

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選 項 | 1 | 2 | 3 | | 4\* | | | 其他 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選項率 | 16% | 4% | 6% | | **74%** | | | 0% | | | 高分組 | 0.03 | 0.00 | 0.01 | | **0.96** | | | 0.00 | | | 低分組 | **0.32** | 0.09 | **0.14** | | **0.44** | | | 0.01 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 難 度0.7 | 鑑別度0.52 | | |  | |  |  | |  | | ------------------------------------------------------------------------------------- | | | | | | | | | | | |
| 分年細目 | 5-n-13能解決時間的乘除計算問題。 |
| 認知層次 | 程序執行 |

※ 弟弟完成一架飛機模型需要1小時20分鐘，弟弟花了4小時可以完成多少架？

3 4 5 6

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選 項 | 1\* | 2 | 3 | | 4 | | | 其他 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選項率 | **77%** | 11% | 10% | | 3% | | | 0% | | | 高分組 | **0.97** | 0.01 | 0.02 | | 0.00 | | | 0.00 | | | 低分組 | **0.44** | 0.25 | 0.22 | | 0.08 | | | 0.01 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 難 度0.71 | 鑑別度0.53 | | |  | |  |  | |  | | ------------------------------------------------------------------------------------- | | | | | | | | | | | | |
| 分年細目 | 5-n-13 能解決時間的乘除計算問題。 |
| 認知層次 | 解題思考 |

※ 小慈組合1個小花燈要花2小時16分30秒，12小時至多可以組合完幾個花燈？

① 4個 ② 5個 ③ 6個 ④ 7個

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選　項 | 1 | 2\* | | 3 | 4 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選項率 | 0.12 | 0.54 | | 0.23 | 0.07 |  | 通過率：0.54 |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 高分組 | 0.07 | 0.84 | | 0.07 | 0.02 |  | 鑑別度：0.58 |
| 低分組 | 0.15 | 0.25 | | 0.36 | 0.13 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 分年細目 | | | 5-n-13能解決時間的乘除計算問題。 | | | | |
| 認知層次 | | | 程序執行 | | | | |

※ 五年忠班參加12 人制的校際大隊接力，平均每一棒跑15 秒，五年忠班12 棒跑完，總共要花幾分幾秒？

① 1 分 8 秒

② 3 分 0 秒

③ 7 分 12 秒

④ 18 分 0 秒

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選　項 | 1 | 2\* | | 3 | 4 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選項率 | 0.06 | 0.82 | | 0.04 | 0.08 |  | 通過率：0.82 |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 高分組 | 0.00 | 0.98 | | 0.01 | 0.01 |  | 鑑別度：0.47 |
| 低分組 | 0.16 | 0.52 | | 0.11 | 0.21 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 分年細目 | | | 5-n-13能解決時間的乘除計算問題。 | | | | |
| 認知層次 | | | 程序執行 | | | | |

◎本題不符合分年細目的評量重點。

◎機器完成一件成品要3日8時50分，14日19時15

分最多可完成幾件成品，剩下多少時間？

**◎先乘後減策略：**

3日8時50分×4＝13日11時20分

14日19時15分－13日11時20分＝1日7時55分

**◎被除數和除數都換成「幾分」策略**

5－n－16：能認識重量單位「公噸」及「公噸」、「公斤」間的關係，並做相關計算。

※ 「16.3公噸-6公噸700公斤＝？」

9公噸303公斤

9公噸330公斤

9.6公噸

10.4公噸

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選 項 | 1 | 2 | 3\* | | 4 | | | 其他 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選項率 | 5% | 7% | **79%** | | 9% | | | 0% | | | 高分組 | 0.00 | 0.00 | **0.99** | | 0.01 | | | 0.00 | | | 低分組 | 0.13 | 0.20 | **0.43** | | 0.23 | | | 0.01 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 難 度0.71 | 鑑別度0.56 | | |  | |  |  | |  | | ------------------------------------------------------------------------------------- | | | | | | | | | | | | |
|  |  |
|  |  |

※ 藍鯨是世界上最大的動物，剛出生的小藍鯨體重約2.7 公噸。小藍鯨的生長速度很快，體重每天增加90 公斤，小藍鯨出生3 天後的體重大約多少公噸？（1 公噸＝1000 公斤）

① 2.79 公噸

② 2.97 公噸

③ 5.4 公噸

④ 8.37 公噸

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ------------------------------------------------------------------------------------- | | | | | | | | | |
| 選 項 | 1 | 2\* | 3 | | 4 | | | 其他 | |
| ------------------------------------------------------------------------------------- | | | | | | | | | |
| 選項率 | 10% | **71%** | 12% | | 7% | | | 0% | |
| 高分組 | 0.02 | **0.95** | 0.03 | | 0.00 | | | 0.00 | |
| 低分組 | 0.24 | **0.36** | 0.22 | | 0.17 | | | 0.01 | |
| ------------------------------------------------------------------------------------- | | | | | | | | | |
| 難 度0.66 | 鑑別度0.59 | | |  | |  |  | |  |
| ------------------------------------------------------------------------------------- | | | | | | | | | |

◎0.4公斤＝( )公克

(1)利用整數倍單名數化聚想法來解題

1公斤＝1000公克，可以利用「1000×5＝5000」

算出5公斤是5000公克。

1公斤＝1000公克，也可以利用「1000×0.4＝400」算出0.4公斤是400公克。

(2)利用單位量轉換的概念來解題

0.4公斤是0.4個1公斤

🢣 0.4公斤是0.4個1000公克(1公斤＝1000公克)

🢣 0.4公斤是1000公克的0.4倍(可以記成1000×0.4)

🢣 0.4公斤是400公克(1000×0.4＝400)

(3)利用比的概念來解題(六年級)

1公斤：1000公克＝0.4公斤：x公克

◎60公克＝( )公斤

(1)利用整數倍單名數化聚想法來解題

1公斤＝1000公克，可以利用「6000÷1000＝6」

算出6000公克是6公斤。

1公斤＝1000公克，也可以利用「60÷1000＝0.06」算出60公克是0.06公斤。

(2)利用單位量轉換的概念來解題

60公克是60個1公克

🢣 60公克是60個0.001公斤(1公克＝0.001公斤)

🢣 60公克是0.001公斤的60倍(可以記成0.001×60)

🢣60公克是0.06公斤 (0.001×60＝0.06)

(3)利用比的概念來解題(六年級)

1公斤：1000公克＝y公斤：60公克

1公斤 ＝ 1000公克

?公斤 1公克

5－n－17：能認識面積單位「公畝」、「公頃」、「平方公里」及其關係，並作相關計算。

※ 王先生將一塊450平方公尺的土地全部平分給3個孩子，每個孩子分到的土地面積是幾公畝？

150 15 1.5 0.15

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選 項 | 1 | 2 | 3\* | | 4 | | | 其他 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選項率 | **39%** | 6% | **48%** | | 7% | | | 0% | | | 高分組 | 0.13 | 0.03 | **0.78** | | 0.05 | | | 0.00 | | | 低分組 | **0.65** | 0.09 | **0.18** | | 0.07 | | | 0.01 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 難 度0.48 | 鑑別度0.61 | | |  | |  |  | |  | | ------------------------------------------------------------------------------------- | | | | | | | | | | | |
| 分年細目 | 5-n-15能認識面積單位「公畝」、「公頃」、「平方公里」及其關係，並作相關計算。 |
| 認知層次 | 程序執行 |

※ 長10公尺、寬50公尺長方形農地的面積是多少公畝？

0.5 5 50 500

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選 項 | 1 | 2\* | 3 | | 4 | | | 其他 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選項率 | 8% | **67%** | 6% | | 19% | | | 0% | | | 高分組 | 0.02 | **0.95** | 0.01 | | 0.02 | | | 0.00 | | | 低分組 | 0.14 | **0.26** | 0.14 | | **0.46** | | | 0.01 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 難 度0.61 | 鑑別度0.68 | | |  | |  |  | |  | | ------------------------------------------------------------------------------------- | | | | | | | | | | | | |
|  |  |
|  |  |

※ 面積400000平方公尺的土地，也可以說是幾公頃？

① 4000 ② 400 ③ 40 ④ 4

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選　項 | 1 | 2 | | 3\* | 4 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選項率 | 0.13 | 0.12 | | 0.66 | 0.06 |  | 通過率：0.66 |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 高分組 | 0.05 | 0.03 | | 0.9 | 0.02 |  | 鑑別度：0.56 |
| 低分組 | 0.23 | 0.22 | | 0.33 | 0.12 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
|  | | |  | | | | |
|  | | |  | | | | |

整數倍化聚 67% 66%

分小數倍化聚 48%

※ 花園的面積為1 公畝，它的面積與下列哪一個的面積相同？

（1 公畝＝100 平方公尺）

① 邊長為10 公分的正方形貼紙

② 長20 公尺，寬5 公尺的長方形草皮

③ 邊長為100 公尺的正方形農地

④ 長1250 公尺、寬800 公尺的長方形公園

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選　項 | 1 | 2\* | | 3 | 4 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選項率 | 0.13 | 0.66 | | 0.17 | 0.03 |  | 通過率：0.66 |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 高分組 | 0.05 | 0.92 | | 0.03 | 0.00 |  | 鑑別度：0.58 |
| 低分組 | 0.20 | 0.34 | | 0.36 | 0.09 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 分年細目 | | | 5-n-15能認識面積單位「公畝」、「公頃」、「平方公里」及其關係，並作相關計算。 | | | | |
| 認知層次 | | | 概念理解 | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 正方形邊長 | 1公尺 | 10公尺 | 100公尺 | 1公里 |
| 面積單位 | 1平方公尺 | 1公畝 | 1公頃 | 1平方公里 |
| 國際通用符號 | 1m2 | 1a | 1ha | 1km2 |
| 是多少  **平方公尺** | 1平方公尺 | 100平方公尺 | 10000平方公尺 | 1000000平方公尺 |
| 與其他單位的關係 |  | 1公畝  =100平方公尺 | 1公頃  =100公畝  =10000平方公尺 | 1平方公里  =100公頃  =10000公畝  =1000000平方公尺 |

5－n－19：能認識體積單位「立方公尺」，及「立方公分」、「立方公尺」間的關係，並作相關計算。

※ 有甲、乙兩個正方體，甲的邊長是1公尺，乙的邊長是1公分，

請問甲的體積是乙的多少倍？

1 100 10000 1000000

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選 項 | 1 | 2 | 3 | | 4\* | | | 其他 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選項率 | 14% | 34% | 10% | | **39%** | | | 4% | | | 高分組 | 0.05 | 0.13 | 0.06 | | **0.75** | | | 0.01 | | | 低分組 | 0.23 | **0.46** | 0.15 | | **0.12** | | | 0.04 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 難 度0.44 | 鑑別度0.64 | | |  | |  |  | |  | | ------------------------------------------------------------------------------------- | | | | | | | | | | | |
| 分年細目 | 5-n-17能認識體積單位「立方公尺」，及「立方公分」、「立方公尺」間的關係，並作相關計算。 |
| 認知層次 | 概念理解 |

※ 下列哪一個長方體的體積最大？

長方體甲：體積是0.9立方公尺

長方體乙：體積是800000立方公分

長方體丙：長80公分、寬60公分、高180公分

甲 乙 丙 一樣大

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選 項 | 1\* | 2 | 3 | | 4 | | | 其他 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選項率 | **57%** | 13% | 23% | | 6% | | | 1% | | | 高分組 | **0.87** | 0.03 | 0.09 | | 0.00 | | | 0.00 | | | 低分組 | **0.21** | 0.26 | **0.33** | | 0.18 | | | 0.02 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 難 度0.54 | 鑑別度0.66 | | |  | |  |  | |  | | ------------------------------------------------------------------------------------- | | | | | | | | | | | | |
| 分年細目 | 5-n-17 能認識體積單位「立方公尺」，及「立方公分」、「立方公尺」間的關係，並作相關計算。 |
| 認知層次 | 解題思考 |

※ 多少個1立方公分的正方體積木合起來，和邊長1公尺正方體積木的體積一樣大？

① 100

② 1000

③ 1000000

④ 10000000

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選　項 | 1 | 2 | | 3\* | 4 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選項率 | 0.18 | 0.14 | | 0.6 | 0.05 |  | 通過率：0.6 |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 高分組 | 0.06 | 0.03 | | 0.89 | 0.02 |  | 鑑別度：0.59 |
| 低分組 | 0.25 | 0.25 | | 0.3 | 0.10 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 分年細目 | | | 5-n-17能認識體積單位「立方公尺」，及「立方公分」、「立方公尺」間的關係，並作相關計算。 | | | | |
| 認知層次 | | | 概念理解 | | | | |

※ 每邊長3 公尺的正方體，體積是多少立方公分？(1公尺＝100公分)

① 90000 立方公分

② 9000000 立方公分

③ 270000 立方公分

④ 27000000 立方公分

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選　項 | 1 | 2 | | 3 | 4\* |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選項率 | 0.16 | 0.19 | | 0.13 | 0.52 |  | 通過率：0.6 |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 高分組 | 0.06 | 0.09 | | 0.03 | 0.81 |  | 鑑別度：0.59 |
| 低分組 | 0.29 | 0.25 | | 0.24 | 0.21 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 分年細目 | | | 5-n-17能認識體積單位「立方公尺」，及「立方公分」、「立方公尺」間的關係，並作相關計算。 | | | | |
| 認知層次 | | | 概念理解 | | | | |

5－n－21：能理解容量、容積和體積間的關係。

※ 弟弟將400毫公升的水倒入內面長10公分、寬10公分、高5公分的長方體空盒，如下圖。請問水面距離盒口的高度幾公分？

1

2

3

4



|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選 項 | 1\* | 2 | 3 | | 4 | | | 其他 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 選項率 | **54%** | 10% | 9% | | 24% | | | 3% | | | 高分組 | **0.77** | 0.02 | 0.02 | | 0.18 | | | 0.01 | | | 低分組 | **0.30** | 0.19 | 0.19 | | **0.28** | | | 0.04 | | | ------------------------------------------------------------------------------------- | | | | | | | | | | | 難 度0.53 | 鑑別度0.47 | | |  | |  |  | |  | | ------------------------------------------------------------------------------------- | | | | | | | | | | | |
| 分年細目 | 5-n-19能理解容量、容積和體積間的關係。 |
| 認知層次 | 概念理解 |

※ 將一顆石頭丟入內部長20公分，寬30公分，高10公分的長方體容器中，石頭完全沒入水中，結果水位從6公分上升為8公分，請問這顆石頭的體積是多少立方公分？

① 6000 ② 4800 ③ 3600 ④ 1200

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選　項 | 1 | 2 | | 3 | 4\* |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選項率 | 0.17 | 0.12 | | 0.08 | 0.6 |  | 通過率：0.6 |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 高分組 | 0.03 | 0.04 | | 0.02 | 0.91 |  | 鑑別度：0.67 |
| 低分組 | 0.34 | 0.19 | | 0.14 | 0.24 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 分年細目 | | | 5-s-07能理解長方體和正方體的體積公式。（同5-n-18） | | | | |
| 認知層次 | | | 概念理解 | | | | |

※ 有一個正方體水槽，內部每邊長為40 公分，放入一個長15 公分

寬40 公分、高15 公分的長方體後，水槽內部剩下的容積是多少

立方公分？

① 600 立方公分 ② 9000 立方公分

③ 55000 立方公分 ④ 64000 立方公分

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選　項 | 1 | 2 | | 3 | 4 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 選項率 | 0.11 | 0.20 | | 0.59 | 0.09 |  | 通過率：0.6 |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 高分組 | 0.01 | 0.05 | | 0.92 | 0.02 |  | 鑑別度：0.67 |
| 低分組 | 0.22 | 0.36 | | 0.24 | 0.17 |  |  |
| --------------------------------------------------------------------------------------- | | | | | | | |
| 分年細目 | | | 5-s-07能理解長方體和正方體的體積公式。（同5-n-18） | | | | |
| 認知層次 | | | 概念理解 | | | | |

◎「c.c.」是英文「cubic centimeter」

(立方公分)的簡記，是體積的單位。

◎固體的體積：規則　vs 不規則

液體的體積：容量(ml) vs 體積(c.c.)

◎500c.c. vs 500ml vs 500g

**三、四年級 2207797**

**四、五年級 2207800**