Name: Tang Ming Yao
Registration No: 05IPP18F1002
Programme / Section : IPP1

10/10

Tutorial 1

Question 1

Calculate the operations.

(i) $10 + 1100 \div 5 - 30$
$= 10 + (1100 \div 5) - 30$
$= 10 + 220 - 30$
$= 230 - 30$
$= 200$ ✓ (2)

(ii) $40 + 80 \div (4 \times 5)$
$= 40 + 80 \div (20)$
$= 40 + 4$
$= 44$ ✓ (1)

(iii) $16[-5 + (-2)] \times 2 - (-2) - 4$
$= 16[-7] \times -2 - 4$
$= 16 \times 14 - 4$
$= 224 - 4$
$= 220$ ✓ (2)

(iv) $6(-8 + 2) \times (3 + 2) \div 10$
$\div 6(-6) \times (5) \div 10$
$= -6(-6) \times 5$
$= -36 \times 5 \div 10$
$= -180 \div 10$
$= -18$ ✓ (2)

Question 2

Simplify the following expressions.

(i) $$\frac{\frac{x^2 + 2xm + m^2}{(x+m)^2}}{\frac{x^2 + 2xm + m^2}{(x^2 + m^2)}}$$

$= \frac{x^2 + 2xm + m^2}{(x+m)^2}$

$= \frac{x^2 + 2xm + m^2}{(x+m)(x+m)}$

$= \frac{x^2 + 2(x+m) + m^2}{(x+m)(x+m)}$

$= \frac{x^2 + m^2 + x}{(x+m)} \times 2$

$= \frac{x^2 + m^2}{(x+m)^2}$

$= (x+m)(x+m)$

$= x^2 + xm + xm + m^2$

$= \frac{x^2 + 2xm + m^2}{x^2 + 2xm + m}$

$= \frac{(x^2 + m^2)(x+m)}{(x+m)^2}$

$= \frac{(x+m)^2}{(x+m)^2}$

$= 1$ # ✓ (2)

(ii) $$\frac{b+2}{b^2+9b+20} \left(\frac{b+5}{b^2-4}\right)$$

$= \frac{b+2}{b^2+5b+4b+20} \times \frac{b+5}{(b-2)(b+2)}$

$= \frac{b+2}{b(b+5)+4(b+5)} \times \frac{b+5}{(b-2)(b+2)}$

$= \frac{1}{b(b+5)+4(b+5)} \times \frac{b+5}{b-2}$

$= \frac{1}{(b+4) \times (b+5)} \times \frac{b+5}{b-2}$

$= \frac{1}{b+4} \times \frac{1}{b-2}$

$= \frac{1}{(b+4) \times (b-2)}$

$= \frac{1}{b^2 - 2b + 4b - 8}$

$= 1$ ✓ (2)

05IPP18F1008.

Subject:

No:

Date:

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Tutorial 1

Question 1

i) $10 + 1100 \div 5 - 30$

$= 10 + (1100 \div 5) - 30$

$= 10 + 220 - 30$

$= 230 - 30$

$= 200$

1

ii) $40 + 80 \div (4 \times 5)$

$= 40 + (80 \div 20)$

$= 40 + 4$

$= 44$

1

iii) $16[-5 + (-2)] \times (-2) - 4$

$= 16[-7] \times -2 - 4$

$= 16 \times 14 - 4$

$= 224 - 4$

$= 220$

2

iv) $6(-8 + 2) \times (3 + 2) - 10$

$= 6(-6) \times (5) \div 10$

$= -36 \times (5 \div 10)$

$= -18$

2

10

Question 2.

i) $\frac{x^2 + 2xm + m^2}{(x+m)^2}$

$= \frac{x^2 + 2xm + m^2}{(x+m)(x+m)}$

$= \frac{x^2 + 2(x+m) + m^2}{(x+m)(x+m)}$

$= \frac{x^2 + m^2 + 2}{(x+m)} \times 2$

$= \frac{x^2 + m^2}{(x+m)^2}$

$= 1$

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ii) $\frac{b+2}{b^2 + 9b + 20} \left(\frac{b+5}{b^2 - 4}\right)$

$= \frac{b+2}{(b+4)(b+5)} \left(\frac{b+5}{(b-2)(b+2)}\right)$

$= \frac{1}{(b+4)(b-2)}$

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OSIPP18F1028

Subject: Insentive Mathematics

No: Wednesday

Date: 26 . 9 . 2018

Tutorial 1

Calculate the operations.

4½/10

i) $10 + (100 \div 5) - 30$

$= 10 + 220 - 30$

$= 230 - 30$

$= 200$ ✓ 1

ii) $40 + 80 \div (4 \times 5)$

$= 40 + 80 \div 20$

$= 40 + 4$

$= 44$ ✓ 1

iii) $16\,[-5 + (-2)] \times (-2) - 4$

$= 16 - 7 \times (-2) - 4$

$= 16 + 14 - 4$

$= 16 + 10$ ✗

$= 26$

iv) $6(-8+2) \times (3+2) \div 10$

$= 6 - 6 \times 5 \div 10$

$= 6 - 6 \times 0.5$

$= 6 - 3$ ✗

$= 3$

Question 3

Simplify the following expressions

i) $\dfrac{x^2 + 2xm + m^2}{(x+m)^2}$

$= \dfrac{x^2 + 2xm + m^2}{(x+m)(x+m)}$ ✓ ½

$= \dfrac{x^2 + 2(x+m) + m^2}{(x+m)(x+m)}$?

$= \dfrac{x^2 + m^2 + 2}{(x+m)}$ ✗✗

$= \dfrac{x^2 + m^2}{(x+m)}$ ✗

ii) $\dfrac{b+2}{b^2+9b+20} \left(\dfrac{b+5}{b^2-4} \right)$

$= \dfrac{b+2}{(b+4)(b+5)} \left(\dfrac{b+5}{(b-2)(b+2)} \right)$

$= \dfrac{1}{(b+4)(b-2)}$ ✓ 2

No: Larry Daysman (05IPP187F1030) Date:

Tutorial 1

Question 1

i. $10 + 100 \div 5 + 30$

$= 10 + 220 - 30$

$= 230 - 30$

$= 200$ ✓

ii. $40 + (80 \div 4) \times 5$

$= 40 + (20 \times 5)$

$= 40 + 100$

$= 140$ ✗

iii) $16 - [-5 (-2)] \times (-2) - 4$

$= 16 - (+3 \times (-2) - 4$

$= 6(6) - 4$

$= 36 - 4$

$= 32$ ✗

iv. $6(-8 + 2) \times (3 + 2) \div 10$

$= -48 + 12 \times 5 \div 10$

$= -36 \times 5 \div 10$

$= -180 \div 10$

$= -18$ ✓

3

Question 2

i. $\frac{x^2 + 2xm + m^2}{(x+m)^2}$

$= \frac{x^2 + 2xm + m^2}{(x+m)(x+m)}$

$= \frac{x^2 + 1 + m^2}{(x+m)^2} \times 2$

$= \frac{x^2 + m^2}{(x+m)^2}$

$= 1$

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ii. $\frac{b+2}{b^2+9b+20} \left(\frac{b+5}{b^2-4}\right)$

$= \frac{b+2}{(b+4)(b+5)} \left(\frac{b+5}{(b+2)(b+2)}\right)$

$= \frac{1}{(b+4)(b+2)}$

2

No.: Huvert Philip 05IPP18F1035 Date:

Tutorial 1

(1)

i) $10+1100\div5-30$

$=10+(1100\div5)-30$

$=10+220-30$

$=230-30$

$=200$

ii) $40+(80\div4)\times5$

$40+(20\times5)$

$40+100$

$=140$

iii) $16-[5+(-2)]\times(-2)+4$

~~$16-5+4-4$~~

~~$=11$~~

$[5+(-2)$

$16-(3\times(-2))+4$

$16-6-4$

$=6$

iv) $6(-8+2)\times(3+2)\div16$

$-48+12\times5\div10$

$-36\times5=\frac{-180}{10}$

$=-18$

(2)

i) $\frac{x^2+2xm+m^2}{(x+m)^2}$ formula $= a^2+2ab+b^2$

$a^2+b^2=(x+m)^2$

$(x+m)(x+m)$

$=x^2+xm+xm+m^2$

$=x^2+2xm+m^2$

$=\frac{x^2+2xm+m^2}{x^2+m^2}$

$=\frac{x^2+\overset{2}{\cancel{2}}xm+m^2}{(x+m)\cancel{(x+m)}}$

$=\frac{x^2+x+m^2}{x+m}\times\cancel{x}$

$=\frac{x^2+m^2}{(x+m)^2}$

$=1$

ii) $\frac{b+2}{b^2+9b+20}\left(\frac{b+5}{b^2-4}\right)$

$=\frac{\cancel{b+2}}{(b+4)\cancel{(b+5)}}\left(\frac{\cancel{b+5}}{(b-2)\cancel{(b+2)}}\right)$