

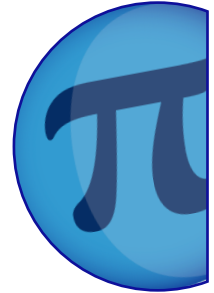


Tank Wars

NAME:

CLASS:

DATE:



Basic

1) Expand the brackets.

a) $2(x + 3)$

b) $5(x + 7)$

c) $8(b + 10)$

d) $x(x + 6)$

e) $y(y + 3)$

f) $a(a - 3)$

2) Evaluate the following if $x = 7$, $y = 3$, and $z = 10$:

a) $x + y$

b) xyz

c) $y(z - x)$

3) Expand the following:

a) $(x + 2)(x + 3)$

b) $(x + 4)(x + 3)$

4) Express the following as single fractions in their simplest forms:

a) $\frac{4}{x} + \frac{5}{x}$

b) $\frac{x}{y} + \frac{7}{y}$

c) $\frac{2x}{x} + \frac{5x}{x}$

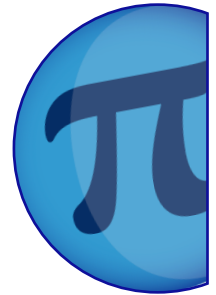


Tank Wars

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Core

1) Evaluate the following if $a = 12$, $b = 6$, $c = 3$:

a) $b^2 + c^2$

b) $c^2(a + b)$

c) $a^2 - c^2$

d) $c(a - b)$

2) Expand the following:

a) $5(2x + 3)$

b) $7(3x - 2)$

c) $8(3 - 2x)$

d) $6x(x + 1)$

e) $9x(x - 2)$

f) $6y(y - 1)$

3) Expand the following:

a) $(3 + x)(3 + x)$

b) $(2x + 1)(2x - 2)$

c) $(8x + 1)(2x - 2)$

d) $(3 - 2x)(9 + 8x)$

4) Express the following as single fractions in their simplest forms:

a) $\frac{6}{x} + \frac{3}{x+1}$

b) $\frac{7}{y} + \frac{6}{y-2}$

c) $\frac{5y}{x} + \frac{6}{x-1}$

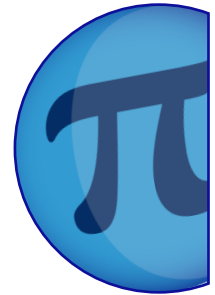


Tank Wars

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Advanced

1) Expand the following:

a) $(2x + 4)(3x - 12)$

b) $(3x - 8)(4x - 3)$

c) $(3x - 2)(2x^2 + x + 5)$

d) $(4x + 2)(3x^2 + 2x + 7)$

2) It is known from past records that 8% of moulded plastic rods produced will be defective. Determine:

a) the probability that any one item would be defective.

b) the probability that any one item would not be defective.

c) the number of acceptable items found in a batch of 5600.

3) Plastic rods moulded on a machine are found to be 1% defective. Determine the probability of obtaining two defective rods in a random sample batch of 80 items.



ANSWERS

Basic

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|---------------------------------|-------------------------------|-------------------------------|
| 1) a) $2x + 6$
d) $x^2 + 6x$ | b) $5x + 35$
e) $y^2 + 3y$ | c) $8b + 80$
f) $a^2 - 3a$ |
| 2) a) 10 | b) 210 | c) 9 |
| 3) a) $x^2 + 5x + 6$ | b) $x^2 + 7x + 12$ | |
| 4) a) $\frac{9}{x}$ | b) $\frac{x+7}{y}$ | c) 7 |

Core

- | | | | |
|--|--|---------------------------------|-------|
| 1) a) 45 | b) 162 | c) 135 | d) 18 |
| 2) a) $10x + 15$
d) $6x^2 + 6x$ | b) $21x - 14$
e) $9x^2 - 18x$ | c) $24 - 16x$
f) $6y^2 - 6y$ | |
| 3) a) $9 + 6x + x^2$
c) $16x^2 - 14x - 2$ | b) $4x^2 - 2x - 2$
d) $27 + 6x - 16x^2$ | | |
| 4) a) $\frac{9x+6}{x(x+1)}$ | b) $\frac{13y-14}{y(y-2)}$ | c) $\frac{5yx+6x-5y}{x(x-1)}$ | |

Advanced

- | | | |
|---|--|---------|
| 1) a) $6x^2 - 12x - 48$
c) $6x^3 - x^2 + 13x - 10$ | b) $12x^2 - 41x + 24$
d) $12x^3 + 16x^2 + 32x + 14$ | |
| 2) a) $\frac{2}{25}$ | b) $\frac{23}{25}$ | c) 5152 |
| 3) $P(x = 2) = 0.1443$ | | |